THE BUILDER
A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXLI. DECEMBER 25, 1931. No. 4638.

MESSRS. HOARE & WHEELER, FF R.I.B.A., Architects.

MEETINGS

MONDAY, *January* 4.

Hammersmith Public Lectures. Mr. Percy Lovell on "The Bridges of London." At the Central Library, W.6. 8 p.m.

Royal Institute of British Architects. General Meeting: Award of Prizes and Studentships. Criticism by Mr. E. Berry Webber on Work submitted for Prizes and Studentships. 8 p.m.

WEDNESDAY, *January* 6.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "German Renaissance, 1500-1900." 6 p.m.

Institution of Heating and Ventilating Engineers. Mr. E. L. Oughton on "Coal Gas as a Fuel for Hot-water Supply and General Heating." At 20, Hart-street, W.C.1. 7 p.m.

Institution of Structural Engineers (South Wales Branch). Mr. E. Taylor on "Steel Bridges." At Cardiff. 7 p.m.

FRIDAY, *January* 8.

Institution of Structural Engineers (Midland Counties Branch). Mr. H. E. Brooke-Bradley on "Bridge Foundations." At Derby.

MONDAY, *January* 11.

Architectural Association. Mr. Graham B. Tubbs on "The A.A. Excursion to Austria, 1931." 7 p.m.

TUESDAY, *January* 12.

Institution of Heating and Ventilating Engineers (Manchester District). Discussion on "Heating Engineers' Specialities." At Manchester. 7 p.m.

WEDNESDAY, *January* 13.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "Belgian and Dutch Renaissance, 1500-1900." 6 p.m.

Manchester Society of Architects. Mr. Joseph Emberton on "Rational Architecture." 6.30 p.m.

Institution of Structural Engineers (Lancashire and Cheshire Branch). Mr. F. E. Drury on "Regulations affecting the Design of Pillars in Building Construction." At Manchester. 6.45 p.m.

THURSDAY, *January* 14.

Institution of Structural Engineers. Mr. H. J. Tapsell on "Creep Properties of Metals." 6.30 p.m.

FRIDAY, *January* 15.

Hampshire and Isle of Wight Architectural Association. Lecture by Professor A. E. Richardson. 6.30 p.m.

Institution of Structural Engineers (Western Counties Branch). Mr. W. M. Elgood on "Factors Governing the Design of Steel Bridge Projects." At Bristol. 7.30 p.m.

La Porte de Notre Dame, Cambrai.

Measured and drawn by Mr. W. H. Cowlishaw.

TECHNICAL LITERATURE

THE increasing flow of new technical books from the Press must at least occasionally cause one to ask who are the readers for books of this kind? The competition in the world's markets makes it necessary to produce cheaply, and well; to discover—and in some cases produce—new requirements. It is evident that close and continuous watch must be kept upon all new discoveries, as well as on each fresh advance in methods of production. This is a large field to cover—one that of necessity must continue and grow. In order to utilise these openings for advance, there must be a class of men with technical knowledge capable of appreciating everything published that may possibly assist in the better production of the goods that they are assisting to produce. It is clear that to produce the technically qualified men there must be (i) Students; (ii) Teachers and Investigators; and (iii) Technical Managers. What are the wants of each of these groups of readers?

Students in the first group obviously approach their subjects at the very beginning; they have everything to learn. The very methods of approach have to be dealt with, and much of the trouble and disappointment experienced might be avoided if those who have the guidance of the junior students' work would only concentrate more on suitable methods of exposition. In the manufactory, the greatest care and skill are expended on the selection of the methods best adapted to secure the desired end from the materials available. All the peculiarities of the raw material are studied, and all the stages in the process of manufacture are devised, so as best to reach the end in view. But where students are concerned, it appears to be a very general practice to collect them in groups, without any consideration of their individual capacities or requirements, and pass them through an organised course of instruction devised to meet the necessities of an assumed average crowd of students. This is treating intelligent beings on a much lower plane than inert matter such as wood, iron, etc., receives in any ordinary factory! The student is left all too frequently to muddle through his difficulties, until he reaches the stage in his career when some one notices an achievement which marks him as a "bright boy." Particularly is this noticeable in all elementary work. This is the field that very many authors endeavour to fill by writing books which deal with the difficulties that they personally experienced in their student days. Probably at any given time there are amongst a group of students very few who have similar difficulties. For example, one student's mind works slowly, and consequently he finds it difficult to keep pace with his lecturer, and so gradually gets left behind. Such a one may be, and frequently is, capable of very great things, but unless he possesses sufficient grit and determination he may retain only a very partial and imperfect knowledge of his subject. Such cases as these give rise to the demand for books that will enable a conscientious and determined student to read over and over again any troublesome portion of his subject which, for want of time, he failed to grip during the lecture. Such reading after each lecture may suffice to keep such a student up to date in his study, but to do so needs real grit on the part of the student, as well as the right kind of book for his reading. There is a field for many different books covering the same field of elementary work in any given subject, if all the different angles from which the subject may be viewed are dealt with.

Turning to the second group of readers—the teachers—a little consideration will soon make it evident that here is a very different field of thought to be supplied. The conscientious teacher will desire to keep himself up to date, both as to new advances in his subjects as well as to fresh methods of presentment of any part of the syllabus, both old and new. He will also desire to gain fresh inspirations for his work so that he may be able to gain and retain the attention of his students. There are very few teachers who can inspire their audience, and make them enthusiastic workers. The author who would supply the wants of the teacher class has possibly the harder task in the writing of technical textbooks.

There is another class of matter for which "live" teachers and workers are always looking, i.e., that in which some fresh advance in knwoledge is chronicled. This type of writing is quite distinct from those we have been considering. It is more condensed, written for readers who are assumed to know as much as the author about the subject, so the space available is entirely devoted to a brief statement of the fresh results obtained, or it may be some experimental confirmation of speculative results which arise out of a mathematical extension of well-known laws, hitherto resting solely upon reasoning, together with a full detailed description of the methods used by the author in his work. This class of writing is comparatively small in quantity, so far as the general public are concerned, although in actual fact its volume is relatively large when it is recognised that it is the record of actual work done, frequently taking much labour and time to complete.

The last section is the so-called "Practical Man," *i.e.*, in the past, any one whose scholastic career had been very short, and who, apart from his manual work, had culled his knowledge as best he could. He was consequently dependent almost entirely upon his ability to deduce logically from his experience everything that he wanted for a new departure in his work. Such a man's knowledge is naturally very limited, and in the past he used his "common-sense," and usually scoffed at his "book-read" colleague. But things are changing; in fact, history is repeating itself. George Stephenson, the pit-boy, who ultimately became the world-famed railway engineer, had no education at all, judged by modern standards, but gave his son Robert the best education that lay in his power, and Robert became as successful an engineer—in spite of his "book-reading," then so generally despised—as his father. There is no longer any need to discuss the value of a good scientific education; it is now so generally recognised that no commercial undertaking of any standing could exist without leaders with a good technical education.

But authors writing books for the use of practical men have quite a different demand to meet, and the real difficulty is not infrequently quite misunderstood. It is due to the lack of experience on the part of the authors of the real nature of the "practical man's" needs. A man after his college career joins the staff of, say, some contractor engaged in engineering work. This college training will only be partially utilised by assisting to set out the work, driving pegs here and there, possibly holding a staff, etc. Occasionally he will assist in measuring the quantity of soil removed. Of course, if he is wise he will be noting the methods employed in dealing with soil, how to judge by the character of the strata when support is needed to prevent the earth from falling in, etc. As he rises in his profession, there will come the day when something is wanted—say the moment of inertia of an unsymmetrical section and the position of its neutral plane is wanted—then he will be appealed to (possibly reminded that he is a B.Sc.(Hons.), or something more, to settle the question. Having become "rusty," he turns to his books, only too often to find that his problem, quite a simple one, is not considered. His books will contain tables and calculations, with or without abstruse mathematics, dealing with symmetrical sections symmetrically loaded; there will be tables summarising the results, but of very little real help. The remedy for this would be for those engaged in teaching and in research to leave to men having practical experience the writing of books suitable for use in drawing offices, etc. How can anyone write usefully upon a matter, about which he has little, if any, knowledge, much less write a book to help in its attainment?

From this brief discussion it is apparent that the thirst for knowledge must continue, and the writing of technical works will go on increasing, rather than diminishing. These books, for success, must depend upon the ability of their authors to view their subject from the same angle as their readers. The books will thus be helpful, but they cannot be always completely satisfying, because as each new situation arises new problems will have to be faced; thus the actual world of achievement must always be ahead of the records.

NOTES

Wise and Misplaced Economy.

"ALL those considering building work and schemes should, where the money is available, build now whilst prices are reasonably low and while there is a plentiful supply of workers, materials and goods." The above is very pertinent counsel at the present time in a communication sent to us by Mr. Leslie D. A. Church. There is need of a campaign on behalf of those affected by the misplaced economy which is so seriously impeding the work of building. We should naturally look to the R.I.B.A. and all other bodies who can help in this work. If a publicity campaign is to be adopted we should imagine that for the national well-being the charges would be willingly modified. Bearing in mind how much is affected by the withdrawal of building work and schemes it is obviously a matter of widespread national concern that some active protest and propaganda be put forth. We have already done something in this direction and we shall publish an article by Mr. Coppock, secretary of the National Federation of Building Trades Operatives in our next issue.

The R.I.B.A. Library.

A VERY wise action is taken by the librarian of the Royal Institute of British Architects in the issue of a selected list of books on architectural subjects from the Institute Library. We have always felt that the wealth of material there stored was not adequately appreciated, and probably far less made use of than it should be. It is by no means a complete list of what is to be found in the library, but it provides a broad selection of the best books on all subjects; the form in which everything is tabulated and the clear headings of subjects should make it quickly available. It is to be hoped that the issue of this little pamphlet will stimulate the many amongst us into a better knowledge and use of our fine store of literature.

A Good Year Book.

THE first Year Book of the Norfolk and Norwich Association of Architects, 1931-1932, has just been issued, and is so well produced that one is inclined to wish it contained a few illustrations from the many delightful subjects available in Norfolk. The president this year is Mr. Ernest H. Buckingham, F.R.I.B.A. This body was founded in 1920, and already has about one hundred members and associates.

A Housing Contract.

WE think there should be some sympathy felt for a builder who carried out a contract for nearly £70,000 and made only 3½ per cent. profit on the transaction. How far he secured even this poor return appears to have depended on commissions which he paid to those who helped him. In the report we quote from the Registrar in closing the examination of the bankrupt, said: "I have no doubt whatever the District Council will feel it their duty to investigate very seriously the allegations made by the bankrupt, and I will say no more."

Amalgamations in Industry.

WE were pleased to read Mr. Baldwin's observations on amalgamations in industry in his reply to the Opposition amendment to the Address. His remarks were called forth by that portion of the amendment which related to what Mr. Baldwin described as "nationalisation," the actual wording of the amendment being "the planning and co-ordination under public ownership or control of the principal industries . . . ." Mr. Baldwin pointed out that it was one of the greatest mistakes to generalise on British industry as it was far too complex, and generalisations that might suit one group could not be applied to industry as a whole, and he expressed the opinion that though it might possibly be a good thing in some industries (he could not go further than that), amalgamation should not be treated as a general panacea. He contended that it had its drawbacks in tending to discourage initiative and flexibility and to discourage high quality in goods, and that in times of depression it was often the small industry run by a really competent individual who had sufficient initiative and flexibility to adapt himself to rapid changes in the market, and was unhampered by having a vast amount of fixed capital behind him, that pulled through best. Mr. Baldwin dealt with the question at some length and in the course of his observations referred to public supply services and especially to the Electricity and Coal Mines Acts, but as regards the latter pointed out that even there the experimental stage had not been passed.

The Big Combines.

THE Socialist Party, we believe, looks upon the statutory public utility corporations as a sort of stepping stone to nationalisation, but in times of distress these do not seem free from the anxieties of other undertakings, and from the necessity for economy, as will be seen from the meeting of the Metropolitan Water Board reported in *The Times* recently, where the report of the finance committee was considered, calling attention to the increase in the debt charges, and advocating the necessity for financing substantial amounts of capital expenditure from current expenditure or so regulating the rate of capital expenditure as to keep new borrowings below the level of debt redemption. We think there has lately been a tendency to regard the creation of huge combines as a necessity in the rationalisation of industry, and we regard this policy with distrust. The combine eliminates competition and facilitates the formation of "rings" and as a result the quality of goods is liable to depreciate, and in such times as these the risk of losing vast sums of capital is also increased. In the combine, also, the personal element between employer and employed is removed. This movement

Snelling's Corner, Oxted.

From a pencil sketch by MR. ARTHUR KEEN, F.R.I.B.A.

should at least be carefully watched, and we should see with satisfaction a return to the smaller and personally managed undertakings encouraged.

Research on Illuminating Engineering Equipment.

Research on the heating of cables connected to holders containing gas-filled lamps, which is of particular interest to illuminating engineers, is in progress at the laboratories of the British Electrical and Allied Industries Research Association. The experiments are being directed by a sub-committee of the Association under the chairmanship of Mr. C. C. Paterson, which includes representatives of manufacturers, cable makers, supply authorities and electrical contractors. The results are already promising, for it is clear that they will give the industry very distinct guidance as to the causes of the heating and some ways in which it is possible to mitigate the trouble. On account of its high operating temperature and the use of a gas filling, the neck of a gas-filled lamp and its cap reach a much higher temperature than occurs in vacuum lamps. As a result the first inch or so of the connecting leads often attains a temperature which causes deterioration of the rubber insulation. The rubber becomes brittle and hard and eventually cracks, and a considerable risk occurs of the wires within the holder coming into contact and causing a short circuit. The rate of deterioration depends on the temperature of the insulation. In the I.E.E. Regulations for the Electrical Equipment of Buildings it is recommended that the working temperature of cables should not exceed 50° C. for continuous operation. In some fittings this temperature is exceeded by not more than a few degrees and little harm results; in other fittings the temperature may reach over 100° C. and deterioration is then comparatively rapid. The Electrical Research Association has made comprehensive tests on representative fittings used for domestic, shop, office and factory lighting to determine the temperature which may occur in practice. It has been found that the temperature depends on a number of variables, among the most important of which are the effect of the design of the fitting on the dissipation of heat, the amount of heat flowing through the cap of the lamp to the holder and the temperature of the hot air in the convection currents rising from the lamp. An apparatus has been developed which enables these convection currents to be shown on a screen or photographed.

British Tombstones.

We have recently witnessed a strong Press agitation to "Buy British Tombstones." Imported white marble is proclaimed for the monstrous interloper that it is. Certainly let us have appropriate home stone, home wrought, only let us see that our workmanship is worthy, based on the beautiful models in which our burial grounds abound. Moreover, in these days of economy, even a concrete mural tablet, worked half wet in natural or coloured aggregate, can have beauty and dignity; it is immensely cheaper than carved marble and, provided the principles of sound lettering are studied and followed, may achieve a high artistic quality.

Southwark Bridge and St. Paul's.

From a water-colour drawing by Mr. F. Milton Cashmore, A.R.I.B.A.

The Spirit of the Age.

It is natural to the public now, as in old Athenian days, to be readily pleased with some new thing. But where do we find any new modern painting to equal the beauty and charm of the best work of Dutch painters of a century ago? No wonder the modern demands for novelty, clamour and speed offend those who would hope for a world of beauty and of peace. In architecture especially the spirit of unrest is one of the most inimical factors, for repose is one of its very essentials, and it is to be found equally in a great Gothic church and on the Parthenon.

The Cost of Social Services.

The Treasury has issued a "return" relating to the Public Social Services for the year 1929-30. It follows the form of the "return" of the previous year, noticed on January 2 last, and the services included are in respect of Unemployment Insurance, National Health Insurance, Widows and Orphans and Old Age Contributory Pensions, Old Age Pensions, War Pensions and Pensions under the Ministry of Pensions Act, Education, Reformatories and Industrial Schools, the Inebriates Acts, the Public Health Acts so far as they relate to Hospitals, and the treatment of Disease and Maternity and Child Welfare, the Housing of the Working Classes Acts, Poor Relief, the Unemployed Workmen Act and the Mental Deficiency Act. The total expenditure under the above headings appears to be £403,950,000 in Great Britain, that is, £355,647,000 in England and Wales, and £48,303,000 in Scotland. Complete figures are not yet available for the year 1930, but a few estimates are given in this "return" which are disquieting in that they show large increases in the following items:—Unemployment Insurance had increased from £53,296,000 to £101,525,000, Widows' and Orphans and Old Age Contributory Pensions from £26,445,000 to £34,607,000 and Education from £100,510,000 to £104,298,000. Of course, many of these schemes are contributory, but the sum has been raised as follows:—£81,599,000 from local rates, £162,483,000 from Parliamentary votes and grants, and £110,369,000 from "other receipts" in England and Wales: total £354,451,000; and in Scotland £12,565,000 from local rates, £21,535,000 from Parliamentary votes and grants, and from "other receipts" £13,937: total £48,037,000.

Furniture Design.

It is difficult to see where we may look for any Renaissance in furniture design in this country. The squareness of forms and oddities of detail which have beset some of our architecture have found their way into furniture design, and so the essentials of comfort and convenience have been lost, and the graciousness of line and detail have given way to an austerity that goes ill with the desire for pleasant lines and comfortable shapes, such as we all naturally like. We have seen designs for nurseries which suggest expectation of square babies.

GENERAL NEWS

Professional Announcement.

Messrs. Mackness & Shipley, consulting electrical and mechanical engineers, are removing on January 1 from their present offices at 28, Victoria-street, Westminster, to Parliament-mansions (Orchard-street), Victoria-street, Westminster. 'Phone: Victoria 9355.

Architects' Estates.

Mr. Edgar Harry Selby, A.R.I.B.A. (69), of Bromley, Kent, retired merchant (net personalty £25,994), left £29,349.

Mr. Henry Alfred Whitburn, F.R.I.B.A., 73, of Woking, left £10,228, net personalty £4,891.

St. Paul's Church, Goodmayes, Essex.

The new west front of this church, which we illustrate on our Meetings page, is now completed. Messrs. Hoare & Wheeler, FF.R.I.B.A., are the architects, and the builders are Messrs. Goddard & Sons, of Farnham.

The Foundling Site.

The Foundling Site Appeal Council announce that Lord Rothermere has decided to purchase a further section of the Foundling site to add to the quarter which he had already secured as a children's playground in memory of the two sons whom he lost in the Great War. This purchase completes the preservation of the forecourt as far as the belt of trees.

False Economy on the Roads.

Mr. Rees Jeffreys, chairman of the Roads Improvement Association, presiding at a meeting of the National Council of that body, held at the Royal Automobile Club, said that the records of the Association showed that over £20,000,000 of road work which had been sanctioned by the Ministry of Transport, and the finance which had been arranged, had been stopped. In addition to works over which the Ministry of Transport had control, local authorities, in their zeal for economy, had held up works of repair and maintenance. The Prime Minister's warning against the cry for economy becoming a "stunt" was badly needed in the road world. The association estimated that over 20,000 men in Great Britain would be out of a job in January as a result of ruthless cutting down of road work. Not only the men on the roads, but quarrymen and others in kindred employments were losing their work by the thousands. The council unanimously decided to take steps to press on the attention of the authorities and the public the false economy of starving roads by cutting down maintenance and holding up works of renewal and reconstruction—a policy which inevitably led to larger public expenditure.

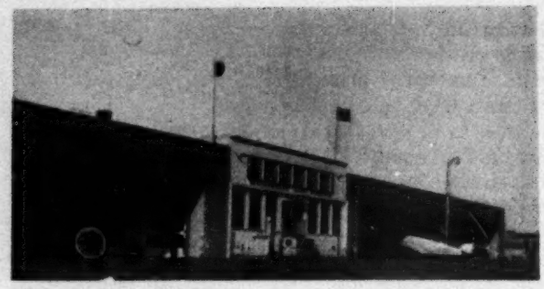


Photo by Mr. John Dower.

Tempelhof Airport, Berlin.

Part of the long range of hangars and workshops which can accommodate up to 100 aeroplanes of average commercial size.

HERR H. KOSINA, Architect.

Preservation of Sussex.

The threatened disfigurement of the residential district of High Salvington and the Sussex Downs to the south of Cissbury Ring by the erection of pylons for the conveyance of electricity from Worthing to Littlehampton has, it is learnt, been avoided as a result of a conference between representatives of the Central Electricity Board and the local authorities. The Board agreed to terminate the overhead line on the western outskirts of the borough and to continue it underground to Worthing generating station at the east end of the town.

Kent County Economy.

The chairman of the Kent County Council Finance Committee, Mr. W. Colthup, states that the total estimated cost of schemes now postponed by the council for reasons of economy, amounting to £4,143,639, includes £2,351,977 in respect of roads and £1,441,662 in respect of education. The Kent Education Committee reports that the total reduction in its 1930-33 building programme since it was adopted is £2,071,375, of which £1,844,242 is in respect of elementary schools and £227,033 in respect of secondary schools.

Registration of Architects.

The Home Secretary received last week at the Home Office the Preparatory Committee appointed by him under the provisions of he Architects (Registration) Act, 1931, for the purpose of the first constitution of the Architects' Registration Council of the United Kingdom. The committee elected Major Harry Barnes, F.R.I.B.A., F.S.I., as its chairman and convener. Any communications relating to the committee should be addressed to Major Barnes at 18, Abingdon-street, Westminster.

Exhibition of French Art.

An official lecture committee has been formed in connection with the forthcoming Exhibition of French Art at the Royal Academy for the purpose of assisting those who wish to organise one or more lectures upon French art. The committee is ready to help in arranging for such lectures by answering inquiries with regard to the subjects offered by the lecturers recommended and the fees required. Inquiries should be addressed to the Hon. Secretary, Lecture Committee, Royal Academy of Arts, Burlington House. Many of the lecturers are willing to lecture outside London.

District and Building Surveyors' Examination.

The R.I.B.A. statutory examination for the office of district surveyor under the London Building Act, and the examination for the office of building surveyor under local authorities, will be held at the R.I.B.A., London, on May 4-6, 1932. The closing date for receiving applications for admission to the examinations, accompanied by the fee of £3 3s., is April 13. Full particulars of the examinations and application forms can be obtained from the Secretary, R.I.B.A.

Middlesbrough School Programme.

Middlesbrough Education Committee has approved the Director of Education's report on educational provisions, to cost £108,000, necessary for the town during the next eighteen months. These include the building of two new schools, the reconstruction or extension of four existing buildings, and the acquisition of several sites. The new school buildings would be at Brambles Farm and on the Emerson area, each costing £22,500. The Fleetham-street school is to be wholly reconstructed at a cost of £24,300. Another recommendation is to adapt, at a cost of £12,000, the historic Jacobean mansion of Acklam Hall, on the outskirts of Middlesbrough, as a new secondary school for boys.

Photo by Mr. John Dower.

The Lyons Airport.

The station building is shown with covered way leading to and from the aeroplanes and restaurant enclosure. (*See page* 1034.)

CORRESPONDENCE

Elgin Marbles' New Home.

SIR,—The new gallery for the Elgin Marbles in the British Museum is being paid for by Sir Joseph Duveen and not by the nation. Who pays the piper may call the tune. Mr. Russell Pope has done good work for Sir Joseph before, and if Mr. Pope is an American it must be remembered that Sir Joseph's American money will pay for much British labour and material.

G. B. J. ATHOE.
Secretary, Incorporated Association of Architects and Surveyors.

Stained Glass and Architecture.

SIR,—I have read with very great interest and pleasure your report, in last week's issue, of Mr. F. C. Eden's recent lecture at the Institute on "Stained Glass and Architecture."

In quoting Lethaby's opinion that "the window of dyed glass is the most perfect art-form known," Mr. Eden stated that he entirely disagreed with Lethaby's opinion. His explanation of Lethaby's meaning never occurred to me, and I have read the passage many times. Obviously Lethaby never intended "glass" to be "independent of externals" when he wrote this passage. Mr. Eden might kindly furnish us with a list of more perfect art-forms.

WILLIAM DAVIDSON.

SHEFFIELD AND SOUTH YORKSHIRE SOCIETY OF ARCHITECTS

Future of English Domestic Architecture.

At a meeting of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, held at Sheffield on December 10, Mr. Darcy Braddell, F.R.I.B.A., delivered a lecture on "The Future of English Domestic Architecture." He said that the subject on which he was to speak was originally notified as "The Birth of Internationalism and the Decline of the English Tradition in Domestic Architecture." He was, however, going to refer to Internationalism by another title, "Mechanism." The two names were synonymous. Everybody engaged in the practice of domestic architecture to-day must feel that the flames of a great revolution in housebuilding were about to spread over the land. Some would try to stem this revolution altogether, nip it in the bud, had, in fact, already tried and were continuing to try. These were mostly the middle-aged and the old, who, because of their conservative traditions, detested it and feared it. Their opposition would not much matter had they not vast vested interests at their backs to help them in the battle.

These consisted of all the monies invested by the public in general, and the Bond-street decorators in particular, in antiques or copies purporting to be antiques. He was not referring so much to the trade in old furniture, though, of course, that was important, but more to the purveyors of panelled rooms, antique mantelpieces, Queen Anne staircases, and such like. This last-named class, which was legion, went about its business of so-called decoration in a delightfully simple manner. These people, of course, were not artists; they designed nothing: they only copied. How often had he not been assured by them that "there is nothing in this modern stuff, it cannot last," rather giving him to understand that they had thought the whole matter out very deeply, and come to that regrettable conclusion, whereas not one in a hundred had the intelligence to think about these things at all. They were merchants, and, realising as they did that a new movement in housebuilding, such as mechanism, must of necessity kill their trade, would not let that trade, where all their money was locked up, die without a very great struggle. On the other hand, the young men of this generation, born to the worship of mechanics, with an innate understanding of them, would certainly do all in their power to further the revolution. They had no material help on their side, but they had their brains and the energy and blind enthusiasm of youth. It was because he believed that every revolution did ultimately do good, however unpleasant it might be for the contented and self-satisfied to live through, that he had come to speak about it.

Mechanism, as he saw it in its present form, was too earnestly inhuman and graceless to last. It was like that fanatical person with whom they were all familiar, who blurted out the apparent truth, however ugly, because he thought it his duty. He was only seeing one side of the picture. Fanatics, however, had their decided use. They "gingered" us all up, and that was precisely what this twentieth century theory of beauty, mechanism, was doing to-day. It was making all who, like himself, were brought up in the belief that the English tradition could never die, and, unlike the old soldier, would not even fade away, look to their creed and wonder. Were they going to give this stranger a welcome, or were they going to accept the advice of the Welsh collier depicted years ago in the pages of *Punch*, and "'eave 'arf a brick at 'im"? Most of the general body of public opinion which counted to-day undoubtedly still favoured this latter view. His own feeling, however, differed. Mechanism, he had not the smallest doubt, was the beginning of a really new style. Whether it would grow out of its present form so as to be quite unrecognisable in a few years, only the future could tell, but that was what he hoped and believed would happen.

At present its main fault seemed to him to lie in the fact that it was much too brutally logical, and did not take nearly enough into account that our mode of life and our ideas and ideals were still those of erring lovable mankind, and not soulless robots, that artificiality was not a very deadly sin, and that people still liked grace and elegance, even if they were wrapped up in polite lies, and that was where he believed the group, of which he counted himself a member, a group that lay between the diehard traditionalist and copyist and the wildly enthusiastic mechanist, might prove itself very useful in the formation of the new style.

All through the nineteenth century only fashions, not styles, were made, because mankind, not realising what machinery really meant, was still thinking in terms of an age when there was none, just like the early motor-car designers thought of horse carriages. But the world was changing and the machine had come into its own. So our houses were going to change, and a true new style was beginning life. We had a new material—reinforced concrete. When this method of building was first used, it made no change to the architectural tradition in vogue. Buildings showed from their external handling no suggestion that they were constructed in a new way. The amazing potentialities of reinforced concrete were completely ignored. All the old treatment of pilasters, pediments, cornices, were still clung to with tenacity during the first few years. Then gradually a change came over the scene, and a school sprang up in Europe with entirely fresh views as to the proper usage of reinforced concrete. It argued that an entirely new material must have an entirely new method of design, that it was absurd to shackle it with the conventional treatment that bygone ages had given to stone and brick. This school began by flying to the other extreme and denying all ornament to its building, that was to say, extraneous ornament that could in any way be associated with the past, and relied entirely on mass and proportion of solids to voids, and that sense of pleasure that an engineer would have in the purely functional to give whatever interest its buildings were to possess. It further argued that a window was intended to look out of, and the world now being capable of rolling a sheet of glass of almost any size, it was clearly ridiculous to cut that glass up into small window panes. It put aside not only the accepted ornament, but traditional canons of good design in stone or brick buildings, as, for instance, the necessity of supporting overhanging projections, such as balconies, with some visible means, and the leaving of the corners of a building as solid piers to give real and visible strength. Le Corbusier was, he thought, the first man to introduce the angle window which deliberately cut away the external angle and left it a series of jags like a dovetailed joint. His example had been extensively followed all over Europe. The new style precluded any form of pitched roof that was not behind a parapet, and consequently hidden, because a tiled or slated roof that could be seen savoured too much of the past, and the new school was determined that, whatever else might be said of it, it wasn't going to be accused of anything like traditionalism.

With concrete and glass, another material was now to hand, and that was stainless steel. This last was clearly going to play a very great part, and might help the modernists out of their roofing difficulties, for there was no good denying that being tied to a flat roof was a great handicap in a northern climate. Stainless steel, of course, had still to be proved, and certainly had not arrived at the state where it could be used for such purposes as he suggested, but he believed the time was not far away when it would.

Nobody was going to quarrel with the arguments of the new school. They were quite sound as far as they went, but the trouble was, they did not go nearly far enough. They were much too limited. Like all theories based on nothing but logic, they would not satisfy the needs of that complex animal, man.

As a case in point, the mechanists would argue something like this: If one wanted to design a balcony to a house, for example, the best and only way to make it was to project a slab of reinforced concrete as thin as it was safe to do so, and then, to protect oneself from falling off, to erect round it a dwarf wall of concrete. There was not the slightest necessity to ornament this wall. So long as it filled its function of protection, that was all that was demanded. In other words, the function only of any feature dictated its design. By this means, they would tell one, simplicity was achieved. Directness, yes, but not simplicity, because that was the result of a reduction from riches within. The Parthenon was a simple building, but it wasn't arrived at by thought on those lines. When primitive man made his first timber dwelling, he didn't achieve simplicity, but only directness, and that was all, in his (the lecturer's) judgment that the mechanists had done so far. He thought they were perfectly right to say that the time had now come to realise that we lived in a new world, with new building materials, and that it was no good applying to these materials the worn-out traditions of others. He also agreed with them that they had got to go right back to the very beginning and start with fresh principles; but where he did *not* agree with them was that there were no lessons to be gained from a study of the past, and that the architecture of yesterday could not help in any way with that of to-day. A house was not, and never could be, quite in the same category as a motor-car or an aeroplane, and the æsthetics of one could never entirely be applied to the other. Imagine, if one went to China, for instance, and saw the Chinese building houses exactly like the English, one would be shocked beyond expression, and rightly so, because one would say, "These people have nothing in common with us; their whole conception of life is different. Why, then, do they build their houses like Europeans?" But, on the other hand, if one saw a Chinese aeroplane, one wouldn't expect it to look any different from an English one; and that was the weak spot of the arguments of the present-day mechanists, it seemed to him. Man was too old to cast aside, like worn-out clothes, all the experience he had gained in making a house. It was too much to ask of him; and, passionately interested in machines as he was, he was not one himself.

Another very great danger, the lecturer foresaw, in this present phase of mechanism was that hundreds of people would try it and not understand in the least what they were doing, and some very dreadful little houses would result. Perhaps they would say, "No more dreadful than the houses built by ignorant practitioners in other days." Nearly 200 years ago Pope wrote these lines to Lord Burlington:—

"Yet shall, my lord, your just, your noble rules,
Fill half the land with imitating fools,
Who random drawings from your sheets shall take,
And of one beauty many blunders make."

Memorial to Dame Millicent Fawcett.

It is learnt that with the approval of the Dean and Chapter of Westminster, arrangements have been made for adding a memorial to Dame Millicent Fawcett to that of her husband, Henry Fawcett, which now stands in Westminster Abbey. The plans have been drawn up by Sir Herbert Baker and Mr. Walker, and the work will be put in hand at once.

CASTLES IN THE AIR

By REGINALD HALLWARD.

It has been said, with some truth, that we shall find in Rome what we brought with us, and so, amid the scenes of nature, what we see will be according as we are furnished with the means of seeing it. As a nation we are prone to regard length of time, rather than intelligence and vision, as the test of our knowledge; yet it is possible that, armed with the latter, we may discover more in a few weeks, or even days, than the former will in as many years, if discovered at all, which by no means follows. But if we can read her secrets, what matchless form and suggestion lie in the contemplation of nature.

At different periods of the world's history, when the burden of knowledge has overridden the simpler issues of life, there has arisen the appeal for a return to nature, as though life had moved away from the best sources of its nourishment. The endowment is not lacking, but the background is not there to sustain it. The bucket is let down into the well, but does not quite reach the water.

These thoughts occurred to me when looking at the strange and romantic forms of some outlying rock formations projecting from the side of the Eiger, as seen from near Scheidegg, in Switzerland. As I looked at these rocks it needed but little vision to see them transformed into buildings, which in structure and design they so well simulated, as to appear the ruins of chapel and monastery, in a solitude well fitted to their character. It needed so little addition to make the transformation complete that I decided to do so, accentuating the walls here and there with window, or entrance, already more than half suggested in their natural forms (see illustration, "Alpine Mountain Architecture"). The sense of solitude on these heights deepens impressions gathered so far from human dwelling-place and the open road. The long journey and climb to reach them adds significance to these strange mountain forms, and in their remoteness to find something parallel to human things is quite impressive. Is it for this reason that, though so far withdrawn, these rock formations remind us that we ourselves are also part of nature and of the universal mind and suggest the relation?

There is another remarkable assembly of rocks outlying from the slopes of the Eiger, which I have also drawn, with little addition, for it needed but little, and which are of the same formations as seen near Scheidegg (see illustration, p. 1033). Imagination is hardly needed for these to become a very castle of dreams, gaunt, embattled tower, keep and ramparts almost complete, suggesting some shattered sojourner from mediæval days. I do not think we need to build this way, but nature may suggest ideas, augment the imaginings of our own minds into a more significant result. These more indirect influences, playing about us, can open out new resources for significant form and design, and our utilitarian requirements may become influenced in this way. Many of our modernist buildings, were the influence of nature to permeate them, would receive from us the endorsement the mind hesitates to give, where functionalism only is made the end.

The notion that beauty is only reached through fitness for use and practical requirements suggests to us that beauty is not an end in itself. Beauty is itself useful—if such inadequate term may suffice for the purpose—more useful than any such doctrines which do not include the need for significance. A building must embrace more than so-called practical requirements, and should adorn them; nor should we be satisfied with these lesser requirements. An ugly teapot may pour out tea as well as one of beautiful shape. It might be well worth while, now that tradition is dead and the Orders dying, to seek through nature new inspiration to reclothe the rather starved and emasculated form of building our modern industrialism has chosen for its dwelling.

By the return to nature I do not mean mere naturalism, or any pose of primitiveness, or such reliefs as those to be seen on Hay's Wharf, but the vital, first-hand impulse underlying the Gothic spirit; one neither of place or time, and to be observed almost equally, whether in the Temples of Java and at Angkhor, or at Amiens and Le Mans. For it is a way of life and no trick of manner, which each of us must know for himself. It is not in any school or doctrine, but an impulse towards noble living, growing out of the fulness of life and giving it expression. It may be that our present distress will contribute towards this, in leaving us freer for the really far more simple issues of life, now intercepted by the pressure of misdirected energy, the burden of knowledge, multiplied organisation—in fact, overpowering materialism. With our wealth departing, and thrown back more on ourselves, we may yet reach a new renaissance of art and life.

The question being asked of a Buddhist priest, why the temples and monasteries were so often built far away from cities, he replied: "Since when did the Lotus come to the bee?" I remember to have read an opinion expressed by Dr. Inge, that the great religious buildings of the early centuries did not necessarily arise amid great centres of population, but that the spot chosen had been formerly of sacred character, perhaps associated with some earlier religious influence, or wayside shrine. So when I look at these strange rock formations on Alpine heights—so closely associated have always been religion and nature—their remote situation suggests at once something of the same character.

Only last summer, when walking in a remote country among mountainous hills, my way led by a narrow pathway. Some distance along, and far from the open road, the rock face enclosing it on one side was exposed, though much hidden by overhanging vegetation. From an odd feeling that often arrested me in passing, I conjectured it might well have been a sacred spot, which its appearance suggested. What was my surprise when, some time later, taken by a clergyman to visit an ancient wayside shrine, to find myself brought to the very spot, and on the exposed rock face, partly hidden by creepers, were the remains of a cross rudely carved on its face, and below the much-worn stone, where pilgrims had kneeled, though hardly discoverable by the ordinary wayfarer.

What craftsmanship there is in these old Alpine rocks; how well they rise out of their sturdy foundations, and I wondered if it was true there was anything like the same sturdiness in the craftsmanship of to-day—whether it was true of us, as I heard a lecturer say, that "craftsmanship was dying in the last ditch, if not already dead." How plausible it all sounds, until we consider the relation of vital craftsmanship to architecture, and the teaching of history, and then it is seen they are both members of one body. The health of one is the health of the other. Architecture will get the craftsmanship it deserves. They rise and fall together. But when talking in this way, what is really meant is building, not architecture, as when we speak of craftsmanship it is often no more than the compromises toward commercialism of applied art. There is fine and applied art, but this use of the word craftsmanship, in some of its present directions, has come to obscure the best claims of the latter. Craftsmanship is inherent in any work of art, whether fine or applied, but art is not necessarily inherent in craftsmanship.

One of my castles in the air outlined on the high summits of the Alps which close in Kandersteg in Switzerland can hardly escape the notice of anyone entering the little town. I have drawn it with hardly any addition to its actual appearance as seen from the valley. Here is a mountain architecture which compels comparison, and I wonder whether these rock formations have suggested architecture—whether architecture is like the mountain, or the mountain like architecture. In either case, it is no great matter. That nature can suggest for us beautiful form and design there is no doubt. As, for example, the seed-case is seen to have inspired many forms in metal work and pottery, and why not in building? Be this as it may, it is through the return to nature, now that tradition and the styles are dead, that we must look for that recovery of significance which is the lack in modern production. Craftsmanship is not enough, nor yet is building. To bring them both again to significance, we must drink from the pure fount of nature to restore that youth of achievement which leads us to express more directly what we feel, and to feel more directly. In this reunion of nature with mankind will significance be born again. Art, when robed in this new vesture, may yet save the world.

BRITISH SCHOOL AT ROME

At a meeting of the council of the British School at Rome, held at 1, Lowther-gardens, S.W., Mr. A. M. Daniel, Sir Edwin Lutyens, Mr. E. R. D. Maclagan, and Mr. Arthur Hamilton Smith were co-opted members of the council, and Honorary Fellowships of the School were conferred in recognition of conspicuous service in promoting the objects of the school on Sir Reginald Blomfield, Sir D. Y. Cameron, Mr. William Russell, Mr. Arthur Hamilton Smith, Senator Corrado-Ricci, and Senator Paolo Orsi.

A meeting of the subscribers to the Faculty of Archæology, History, and Letters was subsequently held in Burlington House, at which Sir Charles Peers (Chief Inspector of Ancient Monuments under H.M. Office of Works, and president of the Society of Antiquaries) read a paper on "The Preservation of Roman Monuments in Britain." If the most precious legacy that any race could leave to posterity was an outstanding work of art, we might, he said, be allowed to regret that it was our country's destiny at the dawn of our historic period to fall into the hands of a nation whose energies were devoted to the more transitory business of Empire-building. Such traces as they had left of their three and a half centuries of occupation were still plentiful and worthy of our consideration and respect, but rather because of their relation to our native history than of their intrinsic merits. The remote province of Britain, almost cut off from the world, could not be expected to bear witness to the heights to which Roman civilisation could rise. The greatness of Rome was not to be seen here in the remains of her cities, but rather in the signs of the extent of her Empire. London, York and Colchester, of inhabited towns, could show on what scale their walls and bastions were designed, and there was yet something to be seen of the defences of Verulam, Silchester and Caerwent. The coast fortresses of Porchester, Pevensey and Richborough remained to witness that our northern seas were never brought under Roman rule; and, most impressive of all, Hadrian's Wall, in its gallant loneliness on the Northumbrian hills, was as eloquent to-day to us as it could ever have been to those who defended it, of the losing battle which man's ambition fights against the inhibitions of space and time. By such things the memory of Rome would always be preserved among us, rather than by the small towns and villages and scattered farms which grew up under the *pax Romana* throughout the occupation. From this occupation we had never wholly recovered, and the care for their relics might be accounted to us as a tincture of the good Roman virtue of *pietas*, still lingering faintly among us after 1,500 years.

"Castles" at Kandersteg.

"Alpine Mountain Architecture."

From drawings by Mr. Reginald Hallward.

"Castle Ruins" at Scheidegg.

TOWN PLANNING AND AVIATION

[We conclude here the First (Interim) Report of the R.I.B.A. Aerodromes Committee, commenced in our last issue. The Secretary is Mr. John Dower, A.R.I.B.A.]

Action by Local Authorities Essential.

It will be seen from the foregoing requirements that aerodrome sites need to be not only of considerable extent—an extent comparable to that of a small to medium sized farm—but also that suitable locations for them are not easy to find. If it be added that an aerodrome serving a town is not much use unless it is in close proximity to the town, and to the roads and railway lines which also serve it (thirty minutes by some readily available means of transport from the centre of the town is a reasonable maximum to aim at), and that therefore it must usually occupy land ripe or shortly to be ripe for building development, it becomes clear that only the special powers possessed by local authorities are sufficient to make the acquisition or reservation of aerodrome sites on an adequate scale a practical proposition. Some few civil aerodromes (in addition to all the military aerodromes which are outside our consideration here) may be owned and developed by the central government—Croydon and Lympne are existing examples; some few more have been and will be established by aeroplane manufacturers, by clubs and private operating companies, though their particularised use may limit their general availability and there is no guarantee of their permanence; in other cases, it may be in most cases, the later development and operation of the aerodrome may best be put in part or whole into private hands; but the vast mass of the future aerodromes of the country must be provided and owned by the community through its local government organisation, and not by individuals, however organised.

Local authorities are empowered, by the Air Navigation Act, 1920, to establish and operate aerodromes, including their approaches, buildings, etc., to buy or rent land for the purpose, and to borrow money for so doing. Compulsory powers of purchase are provided for in the Public Works Facilities Act, 1930. By the use of their general town planning powers they are further enabled to secure reservations as permanent open spaces of future aerodrome sites and to arrange for restrictions on the nature of development, the heights of buildings, etc., in the perimeters of landing fields whether present or future, with a view to keeping them clear from obstructions. Many large cities may find that the nearest suitable site is outside their own area, and in that of some neighbouring urban or rural district, but, by co-operation or the operation of a joint town planning scheme, this condition need be no bar to the full exercise of their powers. In some cases, where centres of population are close together, it may be the best policy for two or more local authorities to combine to set up a joint aerodrome central to their collective area. In more sparsely populated districts it may prove that the County Council is the proper unit to undertake the financial burden, especially of emergency landing grounds; though no single aerodrome can be adequate for a whole county area, and action by the County Council in no way relieves the larger municipalities from the necessity of providing for their own aerodrome requirements.

In any event action by the community to secure at least the reservation of large numbers of aerodrome sites is vital and of immediate urgency. New buildings are rapidly covering all the most suitable localities at all near the centres of towns; projected overhead electric cable lines which it might be possible to divert to avoid determined sites, are spreading a network of future obstructions to sites not yet determined; the expense of purchase and compensation cannot but rise with every month that passes. The day will be very soon when it is recognised that a municipal aerodrome is something that every town must provide and equip, not merely for the needs of the moment, but for such future development of aviation as technically equipped and fully empowered experts can foresee.

Some Allied Needs.

Before passing to consideration of the problems for town planner and architect which arise in connection with aerodromes, it is desirable to mention very briefly some requirements other than actual aerodromes which follow from the development of aviation. It will, firstly, become more and more essential, as air transport increases, that the whole country should be adequately "air-marked" both by day and by night. Besides the markings at landing fields, sites will have to be found for beacons at long intervals along air routes, and all high obstructions, especially when isolated and unexpected (*e.g.*, tall spires and chimneys, wireless masts and overhead electric cable lines,) whether near to or remote from aerodromes, will need marking by distinctive colouring for day and red warning lights for night.

"Air advertising," by signs painted on roofs, etc., along air routes, is rapidly becoming a major nuisance in the United States, and the danger of its development in this country should not be overlooked. Quite apart from the obviously glaring and large-scale interference they must make with the landscape amenities for both air and ground travellers, such signs, through the risk of their being mistaken for the deliberate air-markings of towns, routes, etc., would tend to confuse and endanger air navigation.

Lastly, it is desirable to mention the importance to aviation of efforts at smoke abatement. Foggy conditions and bad visibility are the pilot's greatest handicap, and smoke, especially from the chimneys of industrial towns, is one of the chief causes. The abolition of all but a necessary minimum of smoke is already the object of legislation and widespread endeavour, though they have not yet produced much effect; the safety and regularity of air transport are not the least among the many reasons for urging greater vigour in attacking this nuisance.

Photo by Mr. John Dower.

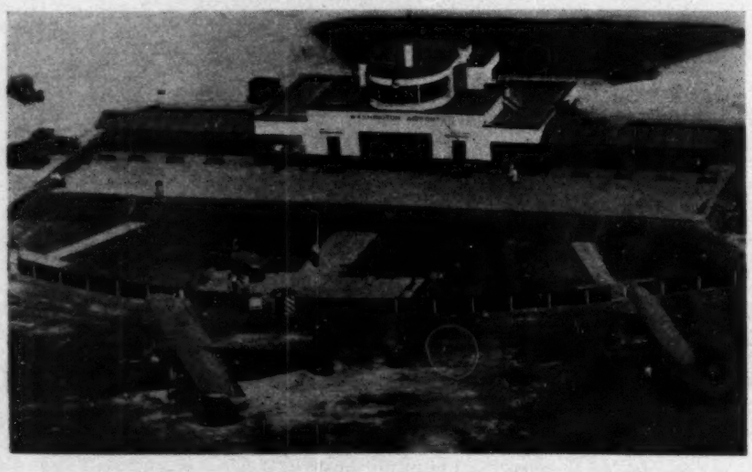
Hamburg Airport: Restaurant and Sight-seeing Terraces overlooking Flying Field.

DYRSSEN AND AVERHOFF, Architects.

Town-Planning Considerations.

It is impossible to give very much guidance for the town-planning problems of aerodromes in a generalised form. Each case must be taken individually and on its merits. The Air Ministry (Civil Aviation Department) and the Ministry of Health are ready to give general advice and assistance to municipalities contemplating or engaged in aerodrome work. No aerodrome can be opened for use without the Air Ministry's licence, and the closest touch with the Ministry to obtain their inspection and agreement is essential. Ministry of Health sanction for the necesary loan and approval of town-planning proposals are normally equally essential.

It is desirable that the services of experienced aerodrome consultants should be obtained for detailed advice in the selection and development of sites from the safety and commercial point of view. For the rest, the individual problems of town-planning design must be left to qualified town planners and architects, and can safely be left to those at least who are alive to the future importance of aviation. The amenity of an aerodrome as an open space should not be forgotten. Every green gap in the ranks of streets and houses, offices and factories is a refreshing lung to the inhabitants. Though an active aerodrome is not, like a public park, an open space where people may wander freely, it may well have parks, playing fields, public golf courses and the like laid out in the lands reserved for future extension or zoned to prevent obstructions around its perimeter. An aerodrome, moreover, is an open space which fully justifies itself economically, and provides peculiar attractions of its own; aeroplaning is, and seems likely to remain, a spectacle as interesting to many people as cricket or football. In Germany, at the biggest airports, large crowds assemble every fine day to



Washington Airport, U.S.A.: Air view of Station and Terrace.

MESSRS. HALDEN, STOTT AND HUTCHINSON, Architects.

watch the flying from enclosures and comfortable restaurants and terraces overlooking the field; in America many municipalities are making their aerodromes pay good profits as places of resort and amusement. A well-organised flying meeting should always draw a large crowd and make a valuable contribution to an aerodrome's finances.

It is perhaps safe to say that normally the choice of an aerodrome site will depend primarily on the satisfaction of safety requirements and on the greatest proximity to the centre of the town that these and considerations of cost permit; thus the question of aerodrome sites is one of the first considerations to be taken into account by the town planner—a further reason for speedy reservation. Direct approach by a first-class road is a first essential. Special railway, tramway or "tube" services to an aerodrome station are further ahead, but are bound to come, and should be planned for if possible. In the case of seaside and seaport towns, it is very desirable that a seaplane station should be provided as well as an aerodrome, and that the two should be planned in close relation to each other and to marine transport services to facilitate the transfer of passengers and goods. Combination of both land and seagoing air services in a single unit offers great advantages of economy in buildings and administration; excellent examples of this arrangement are to be found at Copenhagen, Travemünde and several other stations on the Baltic coasts, and in America. For the special problem of aerodromes to provide immediate service to the centres of large towns, the creation of large, level roofs over railway stations or other buildings, possibly even over rivers, has been widely suggested. Objections on expense and other grounds seem very great, but such ideas are worthy of the closest examination, and alterations in the design of, at any rate, the smaller aircraft, reducing the length of run required for landing and rising, might at any time bring them within the range of practicability. Aviation has already created a revolution in the air; it will create a revolution on the ground. The future comfort and prosperity of the people depends in no small degree on the extent to which this revolution can be controlled and assimilated by organic and deliberate planning.

Architectural Considerations.

Further reports will deal in detail with the conditions and requirements governing the lay-out, planning, construction and design generally of aerodrome buildings. These will be based in part on visits of inspection to the major airports of the Continent and United States. It is necessary here only to stress the importance of good architectural treatment. A cursory view of nearly all the civil aerodromes of Britain in their present state would show little but a series of large sheds with steel or asbestos covering, and wooden-framed huts; nothing it might seem worthy of the name of architecture or the attention of architects. But the aerodrome thus casually equipped belongs already to an out-of-date past, and it needs but little imagination to see that aerodromes in the near future will demand buildings as important and complex as the largest railway stations, giving architects problems and opportunities of the widest possible scope. The aeroplane hangar alone, with its demand for huge spans of doors and roof, is a new and unique constructional form, requiring, if it is to achieve efficiency of service and beauty of appearance, all the trained ingenuity of architects and engineers; while the administrative, traffic and restaurant accommodation, when moulded, as at the magnificent "station" buildings of the Berlin and Hamburg aerodromes, into a single unit, covers an unrivalled variety of traffic and entails planning capacity of the highest order. The air-traveller of the future will often get his first and most vivid impression of a country's architecture and amenities from the buildings, lay-out and surroundings of the aerodrome at which he lands. Such an impression is already one of beauty successfully derived from efficient service for those who land at Berlin and Hamburg and many other Continental airports. It is surely a matter of the greatest importance to Britain's pride as a nation that her chief aerodromes—as much "gates" to the country as her great harbours—should give at least as good an impression to travellers from abroad.

Finally, it may be urged that aviation's claim to supplement and, in part, to supersede other forms of transport is essentially the claim of speed—speed achieved without material increase of danger or discomfort. But speed in the air is little use without corresponding speed—and comfort—on the ground. The aeroplane sets a standard which the aerodrome must rival, and can only rival through the highest services of town planner, architect and engineer. It is in large measure true to say that the future of aviation now rests on the ground.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Norman Culley, President, took the chair at a meeting of this society, held in Leeds, on December 10, when a paper on "Architectural Lighting" was given by Mr. R. W. Maitland, who said there appeared to be little doubt that artificial lighting which formed part of the structure of a building had become universally acknowledged as a logical application of light to illuminate and provide decorative effects to the interiors and exteriors of modern structures. The architect was realising more and more the extensive possibilities available by the use of modern light sources, also the contribution which artificial light afforded to the architectural effect of the interior. The effect of an interior was naturally dependent on the direction and control of the light and its sources, whether employing direct, or semi-direct, or indirect systems of illumination. One was conscious that large luminous or lighted areas had superseded the use of point sources of light, thereby obtaining greater diffusion and a comparatively low surface brightness.

The engineer had found that lighting in terms of foot-candles only must be set aside, and greater consideration given to quality of light, at least, as much as quantity. He must also be able to assist the architect on such points as qualities of diffusing and reflecting media, the position of the various light sources, and the size of reflecting equipment, so that the architect might make the necessary provision in the structure for housing them. The engineer must now adjust himself to new standards of illumination, and, contrary to previous practice, must consider each problem on its own merits. The success of future lighting would be affected by the closest collaboration between architect and engineer.

After showing illustrations of numerous examples of lighting, both interior and exterior, the lecturer said future development would depend upon the trend of actual technique in respect to the lighting elements. At the moment, however, we must pay greater attention towards reflected light incorporated in fixed or mobile elements of decoration and furnishings; for example, in overdoors, boxes, bookcases, and furniture generally. Great economy in current consumption, together with interesting and varied effects were possible. The psychological aspect would be far more fully considered, and it was possible that alternative systems of lighting for, say, summer or winter, afternoon or evening use, also for different categories of employment would be introduced. He would, however, again stress the necessity of the engineer working in close collaboration with the architect.

Mr. Butler Wilson, Leeds, moving a vote of thanks to the lecturer, said the most successful examples of flood-lighting he had seen were at the Barcelona Exhibition and the illumination of Seville Cathedral; and went on to stigmatise Piccadilly Circus at night as a kaleidoscopic pandemonium. How buildings were to be at once designed for daylight and artificial lighting he could not conceive; but of one thing he felt sure: that any successful form of internal or external lighting must conceal its source.

Mr. Harold Thornton (Dewsbury), seconding the vote, said that in one northern city the estimate for floodlighting was so prohibitive that the city gas engineer was called in, and obtained a satisfactory effect by the use of gas, at half the cost.

Mr. D. S. Andrews, principal of the Leeds College of Art, said he thought that most floodlighting failed to do justice to a building's architectural features. The satisfactory realisation of a scheme of upward lighting must be difficult to attain.

In support of the vote, Mr. B. R. Gribbon, joint hon. secretary, said he thought that the floodlighting apparatus should, in the daytime, be adequately concealed. At Luxembourg, boxes, covered by shrubs, hid the fittings used for lighting the war memorial there. He had noticed that advertising signs on a building did not show up well when the whole was floodlighted.

Mr. W. Broadbent (Leeds) said that downward lighting achieved the best results. He thought that lighting from below gave unexpected, and often unpleasant, results.

Mr. Norman Culley said he had no doubt that architectural forms could emphasise themselves by the assistance of floodlighting; and regarding the psychological aspects of the idea, to which the lecturer had referred, why should not places of worship be mellowed with a golden light whilst the collection was taking place?

The lecturer, in reply, said the difficulty of downward lighting was the obtaining of a sufficiently high post from which the apparatus could function. Personally, he preferred that system.

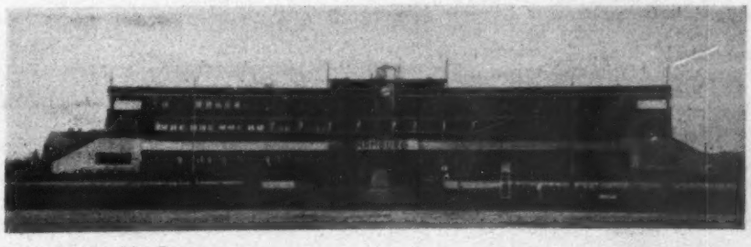


Photo by Mr. John Dower.

Hamburg Airport: Station Building from the Flying Field.

Dyrssen and Averhoff, Architects.

ILLUSTRATIONS

PLATES.

La Porte de Nôtre Dame, Cambrai.

We illustrate as our frontispiece a measured drawing, by Mr. W. H. Cowlishaw, M.B.E., of La Porte de Nôtre Dame, Cambrai, a building which survived the devastation of the War. It forms part of a portfolio of seventy examples drawn from buildings covering a period of three hundred years, which Mr. Cowlishaw proposes at a later date to publish in complete form, probably by subscription.

There are two of the old gateways—the Porte de Paris and the Porte de Nôtre Dame—still standing in Cambrai, as well as portions of the walls and bastions. Both gateways are now isolated and stand on island sites. The Porte de Nôtre Dame is dated 1623 and was built during the Spanish occupation. The drawing shows the façade facing outwards, towards the moat, which no longer exists. Substantially, the façade appears to be in its original form. The plinth is built of rough stone and the remainder of the walls of a fine white stone. The roof is covered with small grey slates.

New Pier, Singapore.

This new pier, at College Quay, Singapore, has been designed by Mr. F. Dorrington Ward, F.R.I.B.A., Architect to the Public Works Department, Singapore.

Flats, Devonshire-road, Bethnal Green.

The main idea in this scheme is to construct a block of flats around a central courtyard facing south, with all the living-rooms looking on the courtyard, with a southern aspect. The flats are approached by external galleries on the east and west. At the back of the building there is a five-story block with flats on the ground, first and second floors, and maisonnettes on the third and fourth floors. The two wings are three stories high, have a flat roof and are connected by a gallery across the five-story block. They terminated in a square pavilion, also planned as maisonnettes. The scheme consists of 32 flats, each flat containing a living-room, one, two or three bedrooms, kitchenette, and bathroom. The flats are being built by the Bethnal Green and East London Housing Association, Ltd., with the object of being let at low rents. The buildings are faced with Buckinghamshire stock brick, multi-coloured and cast stone cornice and dressings, and the floors are solid concrete.

Mr. Ian B. M. Hamilton, B.A., A.R.I.B.A., is the architect.

Proposed Tea Lounge and Sun Deck, Southsea.

This building is to be erected on the east side of Clarence Pier, where this abuts on to the Parade. It is to be a steel-framed building, covered with patent boarding finished to a deep ivory shade, erected on a reinforced concrete raft, in place of the existing decking, supported on concrete piles. The sun deck will have an asphalt floor and corner glazed screens, and at the Parade end is to be roofed over with glazed black pantiles. There is to be a raised dais at this end, open to the front, for a small orchestra. The lower part of the building, which will form the restaurant, is to have maximum width opening windows to the sea, and will be finished in pale grey, black and old rose. The entrance, which is to be flood-lit from above, will be coved and finished with pale apple green plaster, with rustless steel doors, lettering and show windows, with black architraves. The contract has been placed with Messrs. John Lay and Son, at a cost of £5,215.

Mr. Edgar Ranger, F.R.I.B.A., is the architect.

Royal College of Medicine, Baghdad.

This building, lately completed, is simply planned on the cheapest lines and allows for easy extension. The work has been entirely carried out by local labour, and the main structure by a local contractor. The walling is in a local brick, the columns being cast in Atlas White cement concrete, and Messrs. Crittall's steel windows have been used throughout. The cubical measurement of the building is 441,744 cubic feet, the final cost, including fittings, being Rs. 205,000 (£15,185), or just over 8½d. per cubic foot. This is exceedingly cheap for the class of work, taking into consideration that piping, glass, putty, rainwater and drainage fittings, electric fans, lights and fittings, sinks, gas plant, glazed tiles, etc., have to be imported from Europe, and that the price is inclusive of benches, seating and other fittings in laboratories, lecture rooms, etc.

The architect is Mr. H. C. Mason, F.R.I.B.A., Iraq Government Architect.

"Maude" Memorial, Out-Patients' Department, Baghdad.

This building has lately been completed in Baghdad by the Public Works Department of Iraq, the cost having been met from subscriptions raised in the neighbourhood as a memorial to the late Lieutenant-General Sir Frederick Stanley Maude, K.C.B., C.M.G., D.S.O. A very simple plan has been adopted, the patients passing from the waiting spaces directly to the treatment or examination room, and thence to the verandah on the north-west side, where they pass the dispensary on their way out. An average of 1,500 patients are dealt with daily. The total cost of the building, including two small pavilions at the entrance and exit gates, was Rs. 209,641 (approximately £15,000), or about 8d. per cubic foot.

The general contractor for the work was Mr. G. M. Soffer, of Baghdad, who employed local labour throughout. Local bricks of a yellowish tinge are used in the walling, pointed in Atlas White cement mortar. Steel windows were supplied by the Crittall Manufacturing Co., white glazed tiles by H. & R. Johnson, Ltd., sanitary fittings by Twyfords, Ltd., dark-room and theatre blinds by J. Burton & Sons, Ltd. Hot water is supplied throughout the building from an oil fuel boiler fitted with a "Rotamisor" burner and air blowing fan, the oil supply being automatically controlled by means of a temperature regulator. This apparatus was supplied by J. Jeffreys & Co., Ltd.

The Iraq Government Architect (Mr. H. C. Mason, F.R.I.B.A.) was the architect, the Public Works Assistant Engineer in charge of the work being Shooa Effendi Zaloof.

House at Cookham Dene, Berks.

This house, for Sir Charles Harris, is built on the south-east slope of a hill overlooking the Thames Valley, and commands fine and extensive views of the river from Bourne End to Clieveden and beyond. The long, low, and somewhat narrow building, fits well into the side of the hill. The materials used are hand-made multi-coloured bricks and hand-made tiles, and all external woodwork is English oak left the natural colour to avoid periodical painting. The windows are Crittall's metal casements with lead lights. Internally walls and woodwork are finished a shade of dove-grey, with the exception of the staircase, which is of Austrian wainscot wax polished.

The general contractors were Messrs. Y. J. Lovell and Son, of London and Marlow; heating and hot-water supply were executed by Messrs. Benham and Sons; lighting and gas cooking by Messrs. Spensers (Silverlight).

The architect is Mr. G. Berkeley Wills, F.R.I.B.A., of Stone-buildings, Lincoln's Inn, and Marlow, Bucks.

Street Façades, Leeds.

Good progress is being made with the "Headrow" scheme in Leeds, portions of which are shown in the elevational drawings which we reproduce. Sir Reginald Blomfield, R.A., P.-P.R.I.B.A., is the architect.

Drawings for the Grissell Gold Medal.

Although the R.I.B.A. Grissell Gold Medal was not awarded this year, some interesting drawings were submitted in the competition, including those which we illustrate this week. These were sent in by Mr. Kenneth Palmer, A.R.I.B.A., under the motto "Lobster," and were mentioned first in the R.I.B.A. list of entries.

SOCIETIES AND INSTITUTIONS

MANCHESTER SOCIETY.

The second sessional meeting of the Manchester Society of Architects was held on Wednesday, December 9, at the Society's rooms, and was the occasion of a visit from Mrs. Edward Maufe, who gave a talk on "Internal Decoration," illustrated by a large and interesting collection of slides. The lecturer began by mentioning some of the problems left by the architect for the person responsible for the furnishing of the rooms. It frequently occurred that in windows with semi-circular heads there was no seemly way of hanging the curtains, and the necessity for forethought in this and other matters was emphasised. The lecturer then discussed internal design and decoration in general, showing the characteristics of town and country rooms, and the impossibility of imagining a person in tweeds in a typical room of the former type. Some of the lecturer's most interesting photographs were of very successful rooms with the minimum of decoration, whose quietness was a welcome change from the rush and noise of modern life.

Speaking of materials, the lecturer showed the ease with which carpets can be obtained in any specially desired design, at moderate cost, making it unnecessary to use Oriental carpets in every position irrespective of their suitability; she deplored the comparative neglect of the use of curtains as a decorative motif in this country. She also spoke of the importance of suitable lighting for rooms, and advised that more consideration should be given to the occupants of the rooms, who would wish to be seen at their best. This point was illustrated by four photographs of a statuette lighted in four different ways.

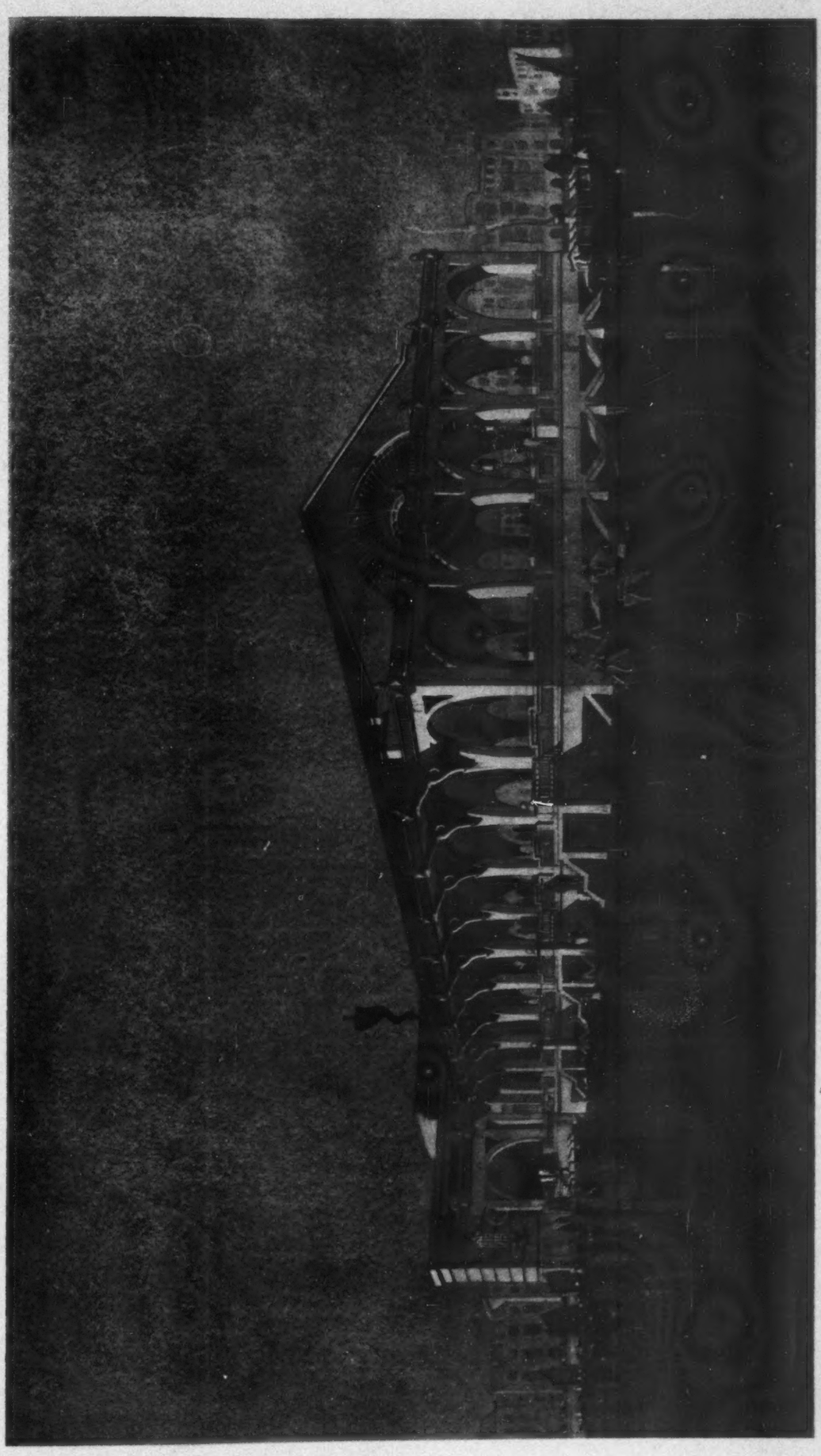
ART IN EVERYDAY LIFE.

THE third meeting of the Maidstone Arts and Crafts Society was held at the School of Art on Wednesday, December 2. Mrs. Herbert Green was in the chair, and the lecturer for the evening was Mr. W. E. Brooks, A.R.I.B.A., who spoke on "The Function of Art in Everyday Life."

The lecturer, having outlined briefly the development of the arts and crafts from the Egyptian to the Renaissance eras and down to the present day, said that art, unlike science, never became a "back number," and what was held as beautiful at one time was still a joy for ever, even in these materialistic times, when a motor-car was prized by most people more than an "old master." Formerly arts and crafts played a very important part in the everyday life of the people. Their pottery, their textiles and their household implements were made by craftsmen, and because they were made by hand and by men who took a pride in their work, they were beautiful and simple, and successful as a piece of craftsmanship. For art was a striving after truth.

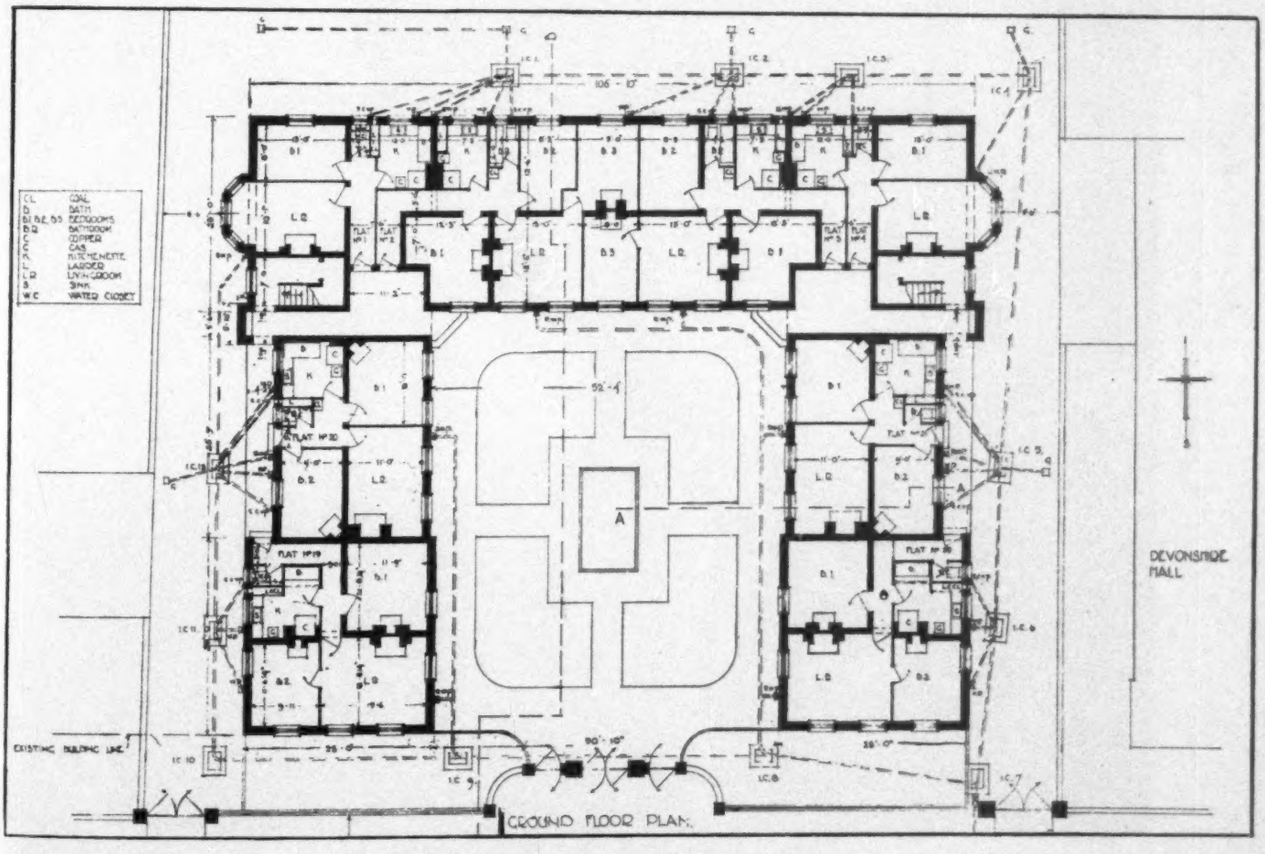
With the advent of the Industrial Revolution, however, men lost that pride in craftsmanship, and art was displaced by utility. But there was a reaction to everything, and, the lecturer said, he believed that a new era was beginning, when the arts and crafts would come into their own again. This was apparent in the wider interest taken by the man in the street in art in general, in old furniture, and in architecture. The standard of commercial art was on the up-grade, as witness the posters of the London Underground Company, and the value of good lettering was beginning to be appreciated. He suggested the Society should form a Civic Committee to protect Maidstone from vandalism.

Mr. S. H. Loweth, proposing thanks to Mr. Brooks, said he did not agree with the formation of a Civic Association as such, but thought that the Arts and Crafts Society—which town councillors and others had always the opportunity of joining—could act in that capacity.



New Pier, College Quay, Singapore.

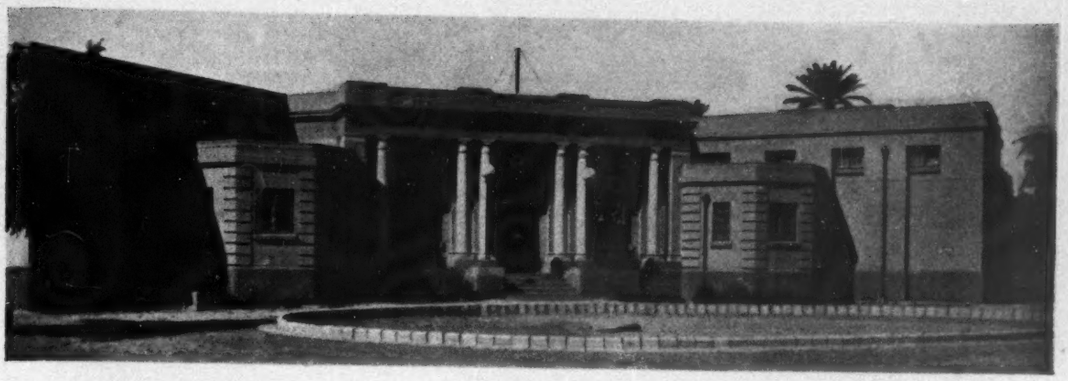
Mr. F. Dorrington Ward, F.R.I.B.A., Architect, Public Works Department, Singapore.



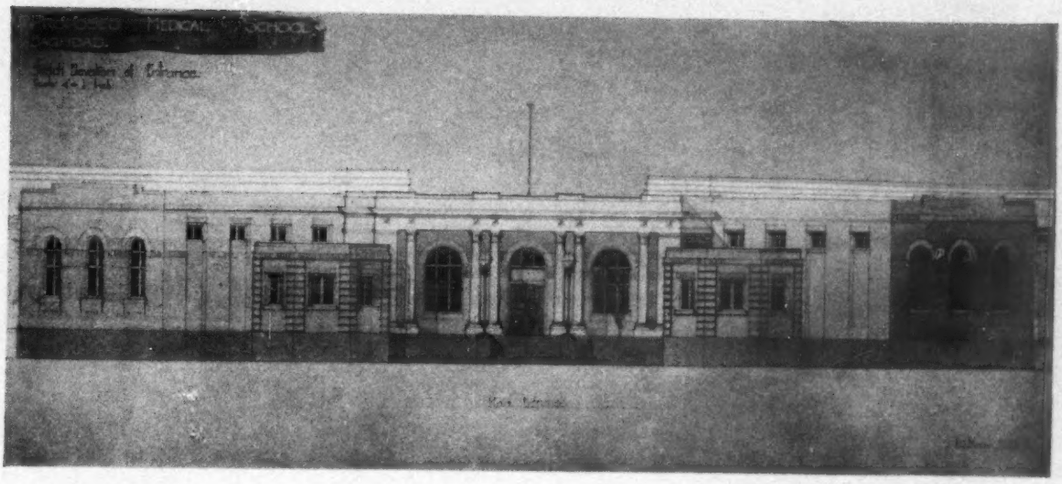
Proposed Flats, Devonshire Road, Hackney.

MR. IAN B. M. HAMILTON, B.A., A.R.I.B.A., Architect.

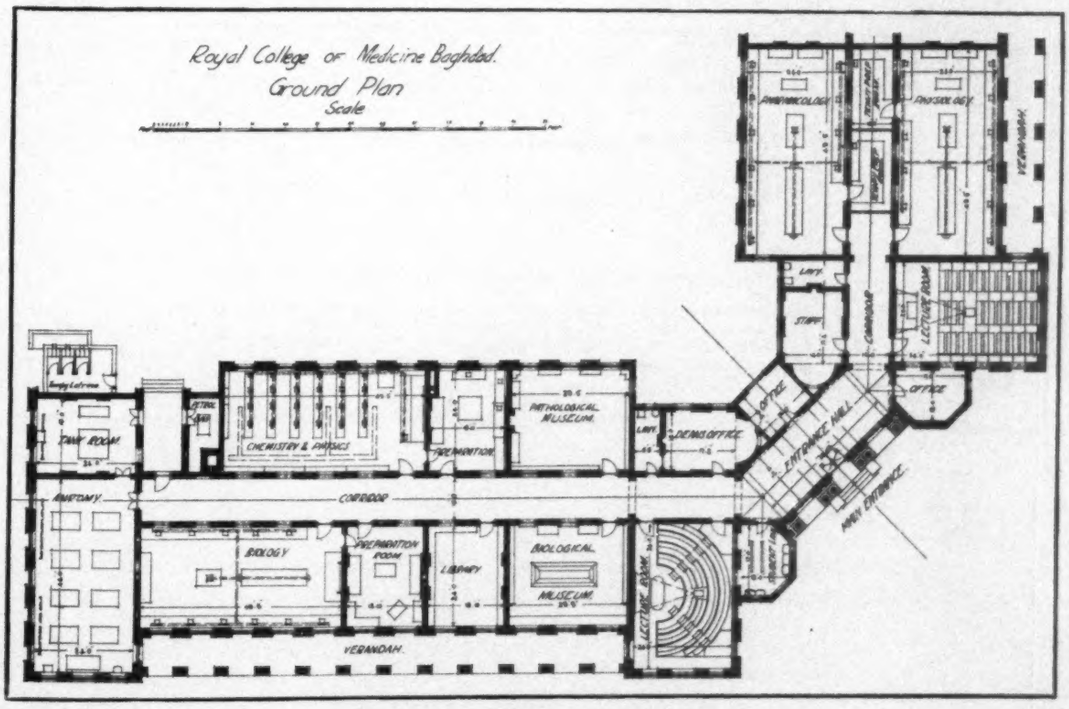
Proposed New Tea Lounge and Sun Deck, Clarence Pier, Southsea.
Mr. Edgar Ranger, F.R.I.B.A., Architect.



Main Entrance.



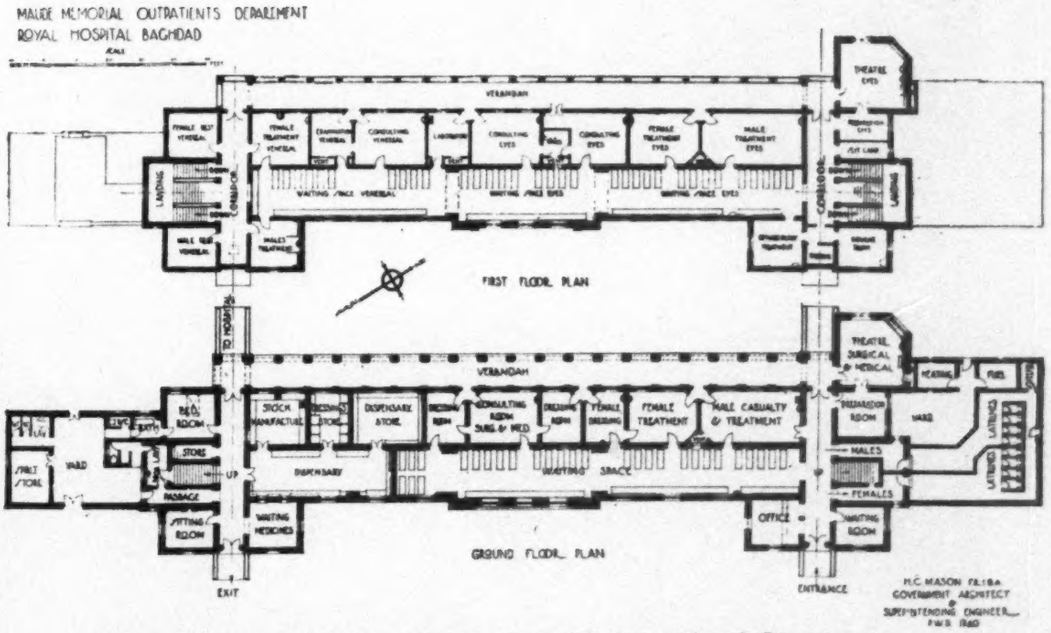
Detail of Main Entrance.



Royal College of Medicine, Baghdad.

Mr. H. C. Mason, F.R.I.B.A., Government Architect.

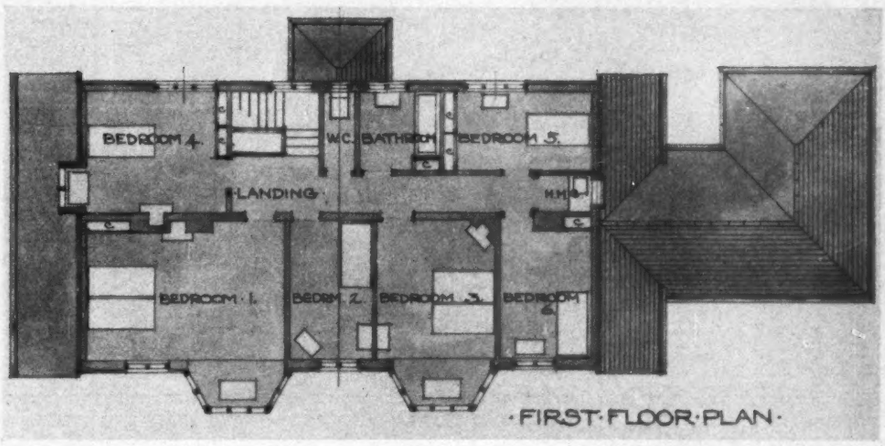
MAIN FRONTAGE.

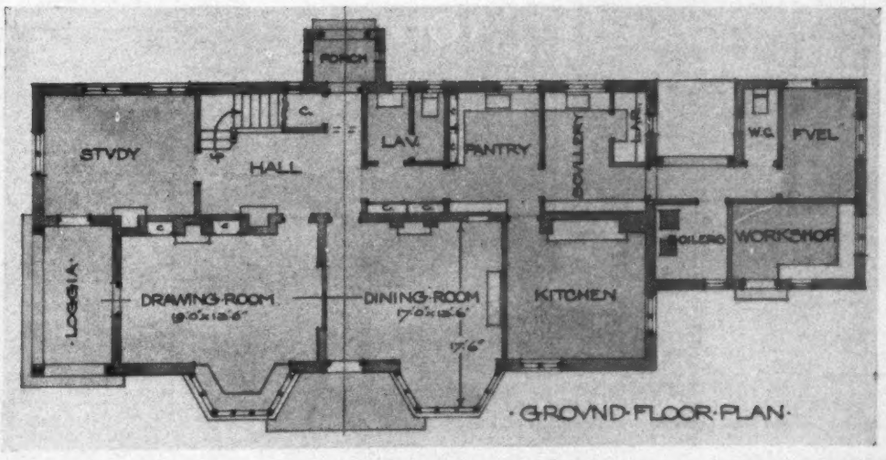


Royal Hospital, Baghdad: Maude Memorial Out-patients' Department.

MR. H. C. MASON, F.R.I.B.A., Government Architect.

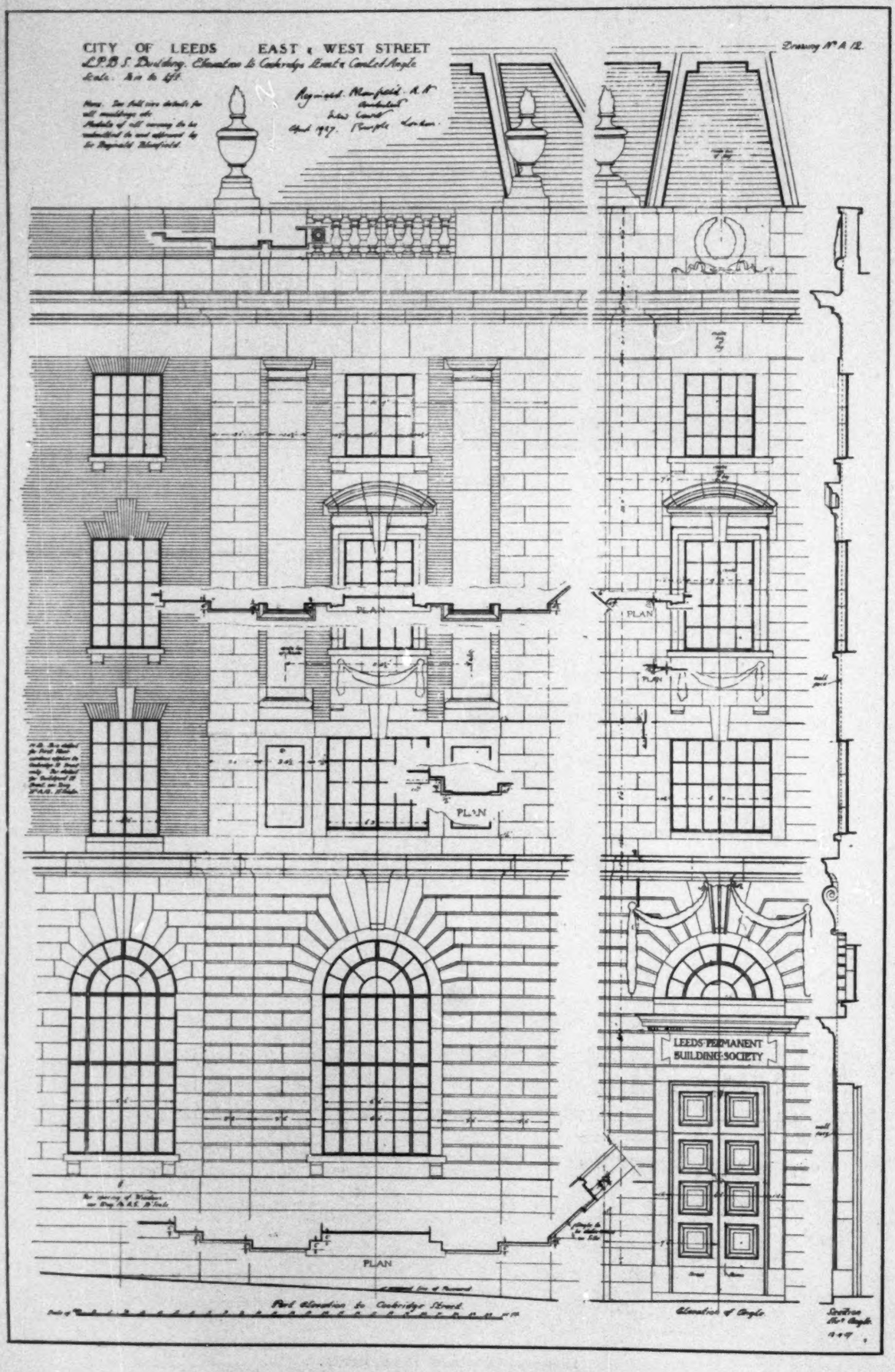
GARDEN FRONT.





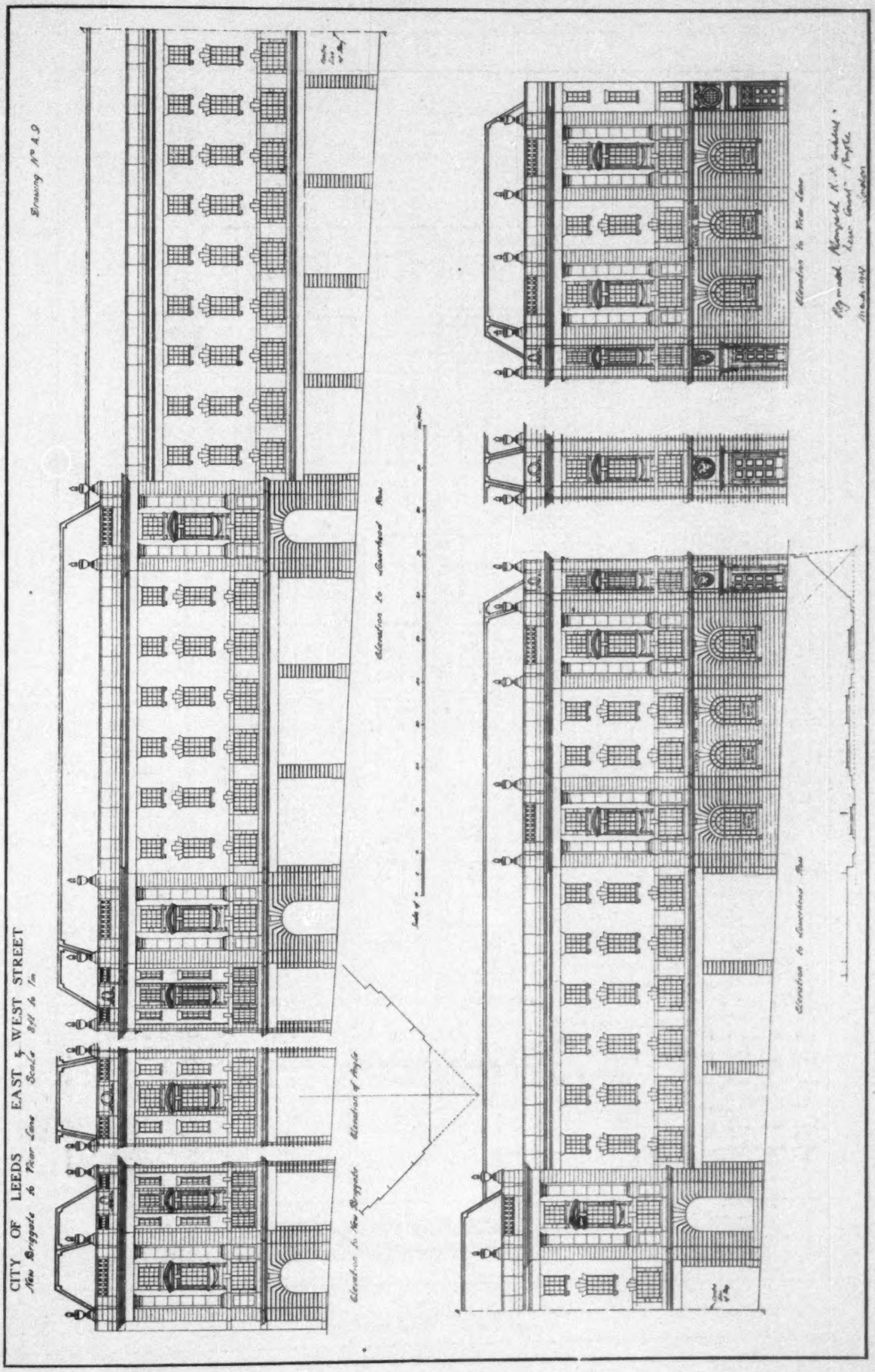
House at Cookham Dene, Berks.

MR. G. BERKELEY WILLS, F.R.I.B.A., Architect.



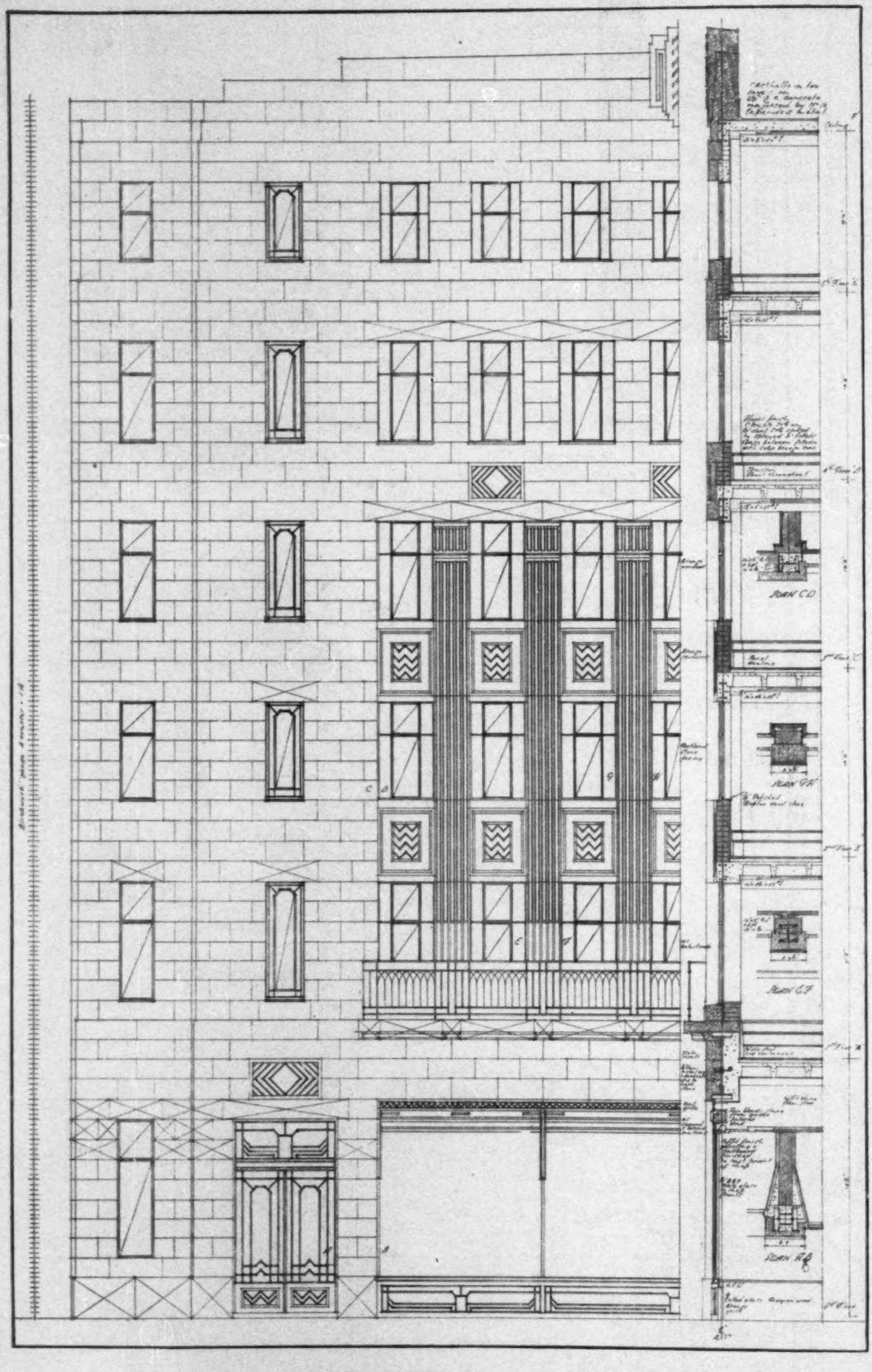
New Street Frontages, Leeds : Detail of Elevation.

SIR REGINALD BLOMFIELD, R.A., P.-P.R.I.B.A., Architect.


CITY OF LEEDS EAST & WEST STREET
New Briggate & Vicar Lane Scale 8ft to 1in
Drawing No 4.9
Elevation to Vicar Lane
Elevation to Queenhead Row
Elevation to New Briggate
Elevation of Boyle
Elevation to Queenhead Row

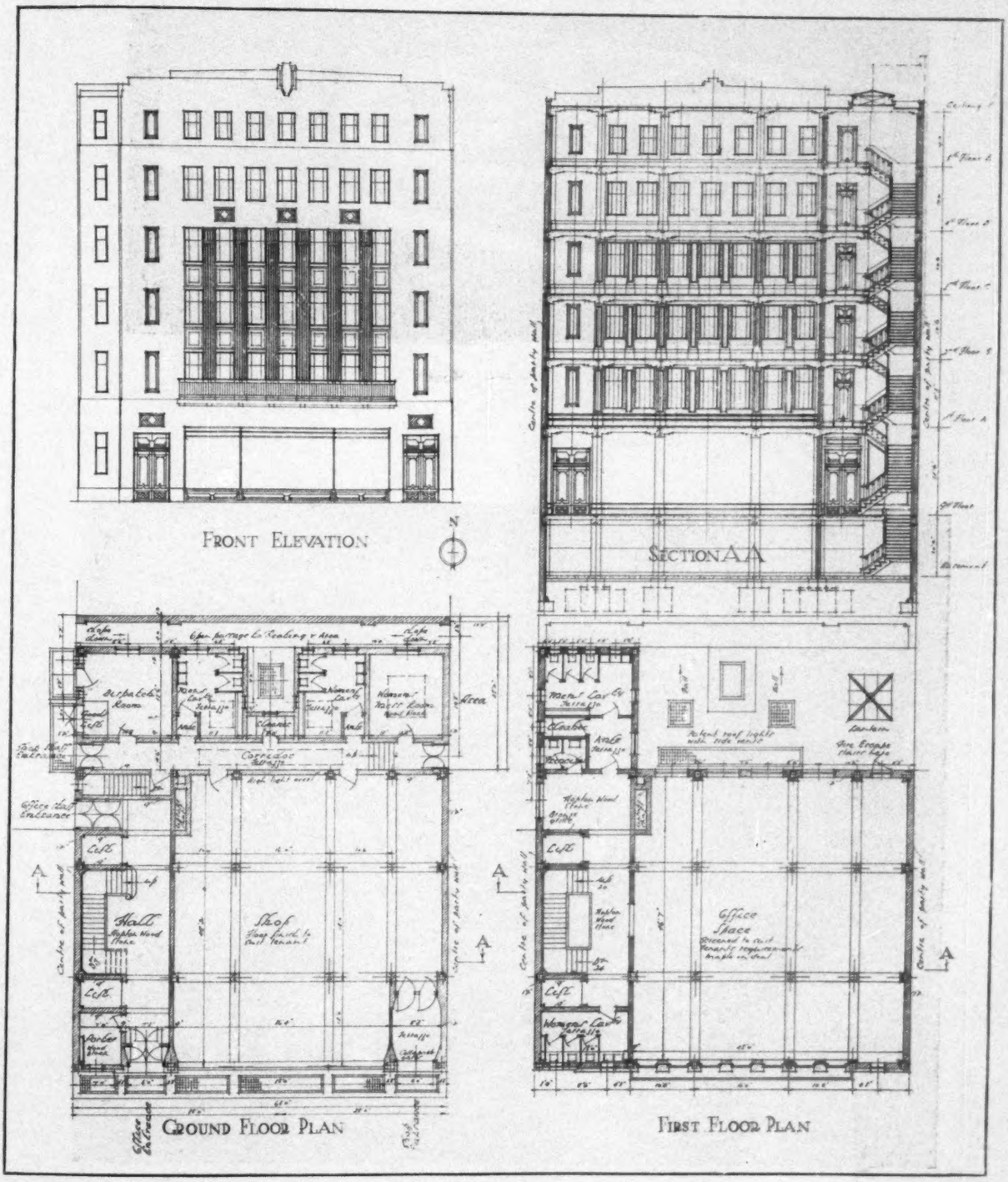
New Street Frontages, Leeds.

SIR REGINALD BLOMFIELD, R.A., P.P.R.I.B.A., Architect.



Design for an Office Building.

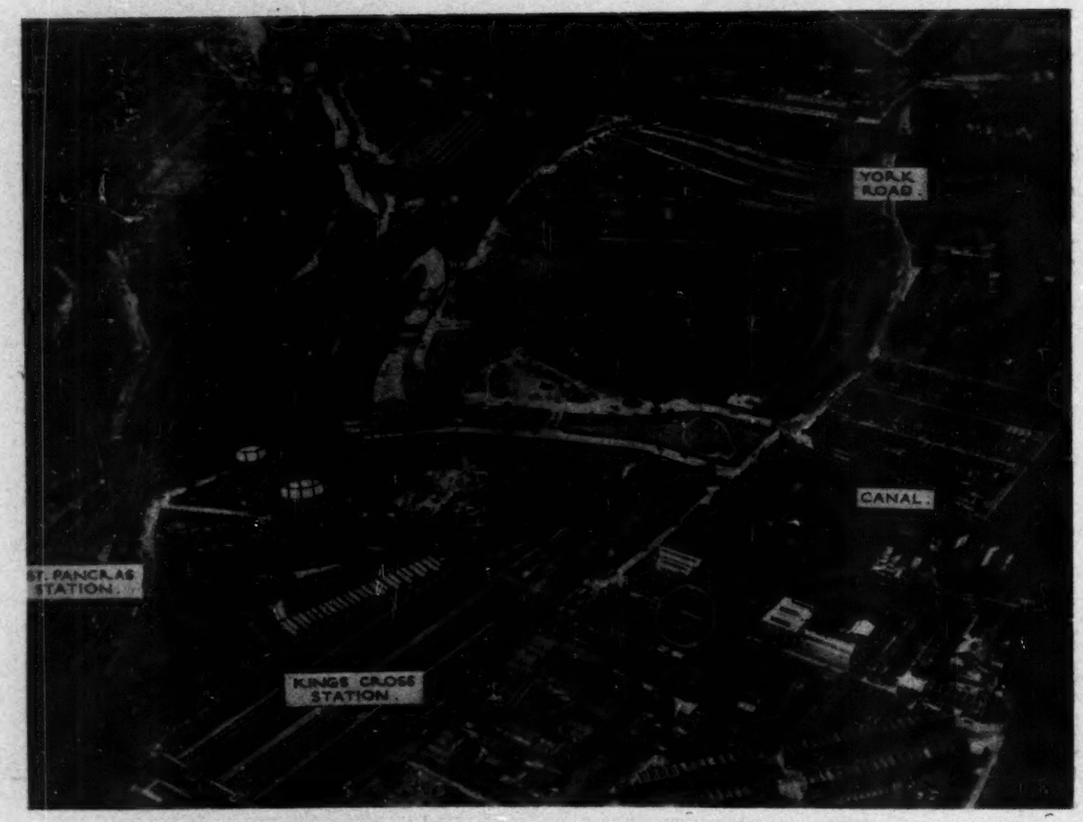
Submitted for the R.I.B.A. Grissell Gold Medal, 1930-31, by Mr. Kenneth Palmer, A.R.I.B.A.



Design for an Office Building.

Submitted for the R.I.B.A. Grissell Gold Medal, 1930–31, by Mr. Kenneth Palmer, A.R.I.B.A.

PHOTOGRAPH OF SCALE MODEL.



AERIAL VIEW OF SITE OF PROPOSED AIRPORT.

Proposed Scheme for Airport at King's Cross.

BY MR. C. W. GLOVER, A.M.Inst.C.E., L.R.I.B.A.

KING'S CROSS AIRPORT SCHEME

[*This scheme was briefly described by its author, Mr. C. W. Glover, A.M.Inst.C.E., at the recent Architecture Club dinner.*—EDITOR.]

THE extraordinarily rapid development of road and air transportation has rendered the linking up of all systems of transport in one central interchange terminal station a pressing necessity, and the scheme outlined below for an airport situated in the King's Cross area includes the undernoted principal sections :—

(*a*) The remodelling of the Railway Goods Depot and the provision of increased warehouse accommodation with adequate means for the rapid handling of goods;

(*b*) The provision of a long-distance Coach Terminal Station and Garage;

(*c*) The provision of an interchange terminal station for City omnibus traffic with adequate accommodation for passengers and traffic staff;

(*d*) The provision of a large public garage;

(*e*) The clearance of slums and the rehousing of the populace of the cleared areas;

(*f*) The construction of a new road connection with the object of improving road traffic conditions;

(*g*) The establishment of a central Airport conveniently linking up Road, Rail, Water, Underground, and Air Transportation.

The establishment of an air park at ground level in the heart of a city requires a landing ground approximately four times the area of that which would be required where there is no surrounding obstruction. If, however, the landing ground is elevated clear of all obstructions, the necessary area will be considerably reduced. In order, however, to cope with possible future development in heavier-than-air machines and to provide a reasonable margin of safety, a run of half a mile on an elevated landing ground should be provided in order that the airport may be available for the use of all types of machines. Slotted wings, catapults, arresting apparatus, and other "landing" and "taking-off" devices, together with the improvement in wheel brakes and the probable substitution of a braked tail carriage in place of the tail skid should tend to reduce the necessary run which should be provided; but, until these are universally adopted limitations of the size of the Central London airport would considerably restrict its usefulness.

The scheme designed provides for four intersecting runways, each half a mile long and 300 ft. wide—four times the length of London Bridge and nearly four times the width. These runways would be elevated some 120 ft. above ground level, would intersect at 45 degrees, and would be connected by a circumferential taxiway at the outer ends. This would enable aeroplanes to land and take off into the wind along the appropriate runway and taxi to and from their position round the peripheral way to the main airport station constructed as an extension to the S.E. supporting building.

The accompanying photograph of the scale model* illustrating this scheme (page 1046) shows the arrangement. The total area covered is 126 acres, but the arrangement involves the minimum obstruction of light and air to the roads and railway sidings underneath, and at the same time minimises the capital cost without in any way restricting the usefulness of the airport or introducing any degree of danger. The provision of a solid top deck of adequate size would entail a prohibitive cost, whereas the capital cost of this scheme is estimated at five million pounds, only a portion of which would be chargeable to the Air Services. The work is sectionalised, and each successive development is claimed to be amply justified under modern conditions, and can be made revenue-earning and economically self-supporting. The estimates show, on a conservative basis, that when the central airport, together with its associated activities, are fully established, a revenue of £350,000 per annum would be secured.

There are 36 supporting buildings having an aggregate floor area of 76 acres (3,310,560 sq. ft.) available for use as shops, offices, warehouses, showrooms, workshops, factories, etc., in addition to hangars and repair shops which would be established in some of the supporting buildings. The proposals are to include a passenger escalator connecting with the underground at York Road Station and the interchange facilities, together with the improved storage and material handling accommodation are expected to result in the gravitation of the great London markets to this site.

Constructed principally over a vast goods yard (see page 1046), the airport could hardly be considered as affecting the amenities of the district. On no other site in London could so many advantages be secured without encroaching upon the rights and privileges of the citizen.

In passing it may be stated that among the materials that would be used would be—concrete, 171,000 cub. yds.; steelwork, 121,000 tons; bricks, 27,000,000; and glass, 1,000,000 sq. ft. The total estimated cost is £5,000,000, and the labour in construction is estimated at 32,000,000 man-hours, while there would be provided permanent additional employment for 660 men as a minimum.

*A scale model is on free public exhibition at 315, Oxford-street, W.1.

BOOK REVIEWS

The Lure of the Fine Arts. By FREDERICK COLIN TILNEY. London : Chapman & Hall. Price 15s. net.

This book contains a wealth of sound information, which is imparted by an enthusiast and scholar who obviously has a real love for his subject. The book needs careful reading, but those who study it, and are able to memorise if only a part of it, will be bound to benefit in their appreciation or selection of pictures. An able foreword is contributed by Sir George Clauson, R.A. We quote the following from Mr. Tilney's preface : "The 'modernistic' developments have now sunk to the level of the trade advertisement, yet at no time did the greater public do more than treat them with indifference or at most with a cynical smile. But the cult has had the effect of first puzzling and then rendering apathetic the masses who once took a healthy interest in traditional art." With these remarks many will agree, especially those who make a serious study of art and are not carried away by the eccentricity of some modern paintings, "boosted" by some present-day art critics. Whilst there are some good modern painters, after them come a host of inferior imitators. This also applies to "modernistic" architecture, which is seldom originated in this country, but is derived from German or Swedish sources. Unfortunately, a modern eccentric building (probably the product of a passing phase) has to be endured, maybe, for a lifetime, whereas a picture may be removed.

In the author's chapter on "The Medium of Expression," referring to water-colour, he says : "Children and amateurs splash away with the utmost lightness of heart. That is so. They 'splash away.' That is what everybody does, and 'trusts to luck.'" How true is this; we "trust to luck," get accidental effects, and if they are good, leave them alone, heedless of what our definite object or colour-scheme was originally intended to be. Perhaps we had better add that this applies to most amateurs. Entertaining and sound are the chapters on "The Art Impulse," "The Phase, the Fine Arts," "The Beauty Sense," "The Medium of Expression," "Subject Matter," and "The Schools," to mention but a few. We have pleasure in commending this book to those who have a serious love, not a superficial one, for pictures; they will be interested. The illustrations are chosen with discrimination.

Practical Design of Simple Steel Structures. By DAVID S. STEWART, B.Sc., Assoc.M. Inst.C.E., etc. London : Constable & Co., Ltd. 3 vols.

This work is one of the well-known "Glasgow Text Book" series, edited by G. Moncur, which deals specially with civil engineering matters. The author acknowledge that he is not traversing new ground, and that there are many really good treatises extant, but says they do not help the young engineer to discover the reasons why certain sections are selected by designers in preference to others which apparently are equally suitable. This is the gap which the author definitely sets out to bridge. For this purpose, the work consists of three volumes : the first is devoted to shop practice; the second to the practical design of structures in steel; and the third is devoted to tables to facilitate the work of design. No knowledge of "Sections or Shop Practice" is required of the reader, and as far as possible only elementary mathematics is employed by the author. In this connection the author does well to warn his readers that without a good working knowledge of mathematics and the principles of mechanics they cannot go very far with their study of structures. In his general preface he writes : "Practical knowledge is just as essential to a good design as ability to make calculations." We would go farther than this, and would say that practical knowledge is of more value than the ability to make calculations. It is only the actual knowledge acquired in practical work that can save one from the risk of gross errors in calculations remaining undetected. The actual experience gained in the shop and field alone enables a designer to reach an economical result. The man trained in the office and at the technical institute cannot appreciate shop and field difficulties, the cost of transport, and the inevitable limitations imposed upon the maximum dimensions of plates and sections, for these are matters outside his experience. Volume I will go a long way towards helping the student to appreciate these technical limitations, whilst helping him to formulate a scheme for calculating systematically when determining the sections required for a structure to fulfil a given duty.

The second volume deals with an example of a structure in which the calculations are given, the results of which ultimately lead to the sections most suitable, with reasons given for the choice made. To all technical students who have not had a shop training this work must prove invaluable and junior draughtsmen and apprentices employed in the works who read these volumes will be helped to understand more intelligently the functions of each member of a structure, and to realise the reasons for their being shaped as they are. In addition, the bibliography will prove useful to the more advanced worker.

Compressed Air, and Its Machinery. By T. H. PLUMMER, D.Sc. (London : The Association of Engineering and Shipbuilding Draughtsmen.) 10s. post free.

This is an ambitious attempt, for we read that "it is hoped that the book is a step nearer to the goal of a practical reference book"; also, "it should be useful to engineers generally, engineers-in-charge, contractors, builders, draughtsmen and students." Again, it has been sought "to avoid the formality of the usual text-book and to provide for the requirements of the busy executive"

The book contains descriptions of numerous types of air-compressors and allied machines, such as pneumatic tools, meters for gas and air, and, apart from minor slips, many workers and students in this class of engineering will find it useful for reference.

LEGAL SECTION

NOTES ON CURRENT CASES

A POINT OF INSURANCE UNDER THE WORKMEN'S COMPENSATION ACT.

We have had occasion lately to call attention to a good many cases concerned with that insidious disease nystagmus, which among other diseases has been included in the term "accident" under the Workmen's Compensation Act, with the result, as the Courts have had occasion to observe, of raising curious and intricate points, but a case has now come before the Court of Appeal—Ellerbank Collieries, Ltd., *v.* Cornhill Insurance Co., Ltd. (*Weekly Notes*, November 21)—raising an important point to insurers. On March 8 the insurance company, the appellants in this case, had issued a covering note to the plaintiffs agreeing to indemnify them for a period of three months against any personal injury or disease coming within the purview of the Act, but it only covered non-fatal accidents. The cover note was made with reference to the terms and conditions of the policy of the company, which contained a clause covering any employee in the employer's immediate service who should sustain any personal injury by accident or disease while engaged in the service of the employer in work forming part of, or process in, the business. The policy was never issued and the cover was terminated on March 19, 1929, but this is not material to the decision. Within the period March 8 and March 19, two men were certified as suffering from nystagmus, one on March 11 and the other on March 12. Both the men had for many years been in the plaintiffs' employ, but at the dates they were certified they were not actually working or being paid wages, one being ill with influenza, and the working place of the other being temporarily blocked by a fall of earth, but their names were contained in the wage sheets. Compensation had been awarded to both men, and it was with respect to the sums awarded that the appellants were claiming indemnity from the insurers. The points raised by the appellants were that the personal injury or disease for which they were liable to indemnify the plaintiffs had not occurred during the currency of the covering note, and that the two workmen were not "engaged in the service of the employers in work forming part of or process in the business of the employers at the material time."

The main point in the case was whether what corresponds to the happening of an accident, which in section 43 of the Workmen's Compensation Act in the case of disease is defined to be the disablement or suspension, occurred within the period embraced by the covering note, March 8 to March 19. Section 43, sub-section (1), provides that where the certifying surgeon certifies that the workman is suffering from a disease within the Act, and the disease is due to the nature of any employment in which the workman was employed at any time within twelve months previous to the date of disablement or suspension, compensation shall be payable as if the disease were a personal injury by accident arising out of and in the course of that employment. In sub-section (2) it is provided that the date of disablement shall be such date as the certifying surgeon certifies as the date on which the disablement commenced, or if he is unable to certify such a date—the date on which the certificate is given. By sub-section (1) (c) the compensation shall be recoverable from the employer who last employed the workman during the said twelve months in the employment to the nature of which the disease was due.

In each case the certifying surgeon had certified that the men were suffering from nystagmus, and that the disablement began on March 11 in one case and March 13 in the other. There had been appeals to the official referee, who had expressed an opinion that in both cases the disease began before January 1, 1929, but the medical referee did not formally reverse the certificates so they stood as good.

The insurance company relied upon a decision of the Privy Council in the case Victoria Insurance Company, Ltd., *v.* Junction North Broken Hill Mine (1925, A.C. 354), in which it was held that the disablement or suspension establishes the happening of the "accident" in the case of disease, but not the date at which it happened. This was a New South Wales statute, and it does not appear from the report whether it contained the further provision contained in the Workmen's Compensation Act here, that the certificate determines the date of disablement; but however that may be, the decisions of the Privy Council do not bind the House of Lords, and the House considered that decision inconsistent with the decision of the House of Lords in Blatchford *v.* Staddon Founds (1927, A.C. 461; *The Builder*, June 24, 1927).

In that case a painter had been employed under various employers as a painter, but on October 23, 1924, he entered the respondent's employment and remained there until December 12 following, when he left owing to illness which the panel doctor diagnosed as cardiac trouble, but which in fact was proved to be lead poisoning. On July 13, 1925, the certifying surgeon certified that he was then suffering from lead poisoning but entered no date fixing the commencement of the disease. As the man was not "at or immediately before the date of such disablement" employed in a process mentioned in the third schedule of the Act, the special presumption provided by section 44 (1), that the disease is due to the nature of the employment, had no application, and the employers contested the claim on the ground that it had not been proved by the workman that the disease was contracted in their employment or aggravated or accelerated thereby. The House of Lords, overruling Dean *v.* Rubian Art Pottery (1914, 2 K.B. 213), held that it was sufficient for the workman to prove that his work with his last employer during the twelve months immediately preceding his disablement was of the same nature and character as the work to which his disease was due.

The second point, that as wages were not being paid the workmen could not be said to be in the employer's service, was also dismissed on the ground that it was contrary to the provisions of the Act, which treated the workman as "employed" at the time of certification by the last employer, who had employed him within twelve months; and further, an opinion of Lord Blanesburgh in Blatchford's case was cited that: "The word 'employment' is not, I think, in this phrase" (section 43, subsection (1)) "used immediately to describe the relation between employer and workman . . . as it seems to me that the word very clearly refers to the work or process in which the workman has been engaged, and not to his contract with an employer to engage in it." Thus the insurance company was held liable to indemnify the employers.

Specific Performance of Agreement to Grant Lease.

The recent case Raingold *v.* Bromley (1931, 2 Ch. 307) is of importance to purchasers, lessees and owners of property, especially as it related to an agreement to grant a lease, and such negotiations are usually, as was the case here, conducted either by the parties themselves or by estate agents on their behalf before legal advice is obtained. The case is one of some complication, but we will endeavour to state it as briefly as possible. The defendant in the action being desirous of letting shop premises, placed them in the hands of well-known estate agents, who, by circular, informed the plaintiff that they were to be let, and the plaintiff, after inspection of the premises, made an offer to the agents over the telephone to take them. The agents, having communicated with their client (the defendant), on December 9, 1930, wrote to the plaintiff as follows:—"Referring to our conversation this morning on the telephone, we confirm that, subject to the terms of a lease, our client is prepared to accept your offer to take the above premises on a 7, 14 or 21 years' lease, at a rental of £350 per annum for the first 14 years, rising to £375 in the last 7 years. . . . We have instructed our client's solicitors to put the draft lease in hand immediately to forward to your solicitors." The letter also contained a reference to a shop front which the plaintiff was to instal. On the same day the defendant's solicitors sent the draft lease for approval to the plaintiff's solicitors, and on December 11 the plaintiff wrote to the defendant's agents:—"I wish to confirm your letter of the 9th inst. Of course, this is subject to my solicitors' approval of the lease."

Some correspondence ensued between the solicitors as to amendments in the draft lease, but we do not set out this correspondence as we think it sufficient to take a statement from the judgment that after a letter of December 17 from the defendant's solicitors, all the terms to be contained in the proposed lease had been agreed, with one exception, namely, the date from which the rent was to commence to be payable. This omission appears to have been made good by a letter from the plaintiff's solicitors agreeing to a certain date and inserted by them in the draft, which was sent to the defendant's solicitors with a notification of the alteration. The latter then wrote, on December 29, the following letter so far as is material:—"We have now received our client's instructions on the draft lease and he is prepared to accept your client's alterations. We are therefore having the lease engrossed, and will forward you a counterpart for execution by your client in due course. . . ." On December 30 the counterpart was sent to the plaintiff's solicitors and the other part was sent by his solicitors to the defendant for execution, but he then declined to proceed further in granting the lease, and on January 24, 1931, leased the premises to another person. The plaintiff then brought this action claiming specific performance of the agreement to grant a lease and alternatively damages. It was admitted at the hearing by the defendant that the estate agents had written the letter of December 9 under his instructions and that the letter of his solicitors of December 29 was also written under his instructions. To explain what follows it is necessary to state that at first the plaintiff had only pleaded the letter of December 9, but at the trial leave was given to amend by pleading also the letter of December 29.

There was no question as to the first of the two letters that the estate agents had authority to enter into a binding agreement, because of the admission stated above of the defendant, so the first question to be decided was whether the letter of December 9 itself constituted a binding agreement. This question really turned upon the words "subject to the terms of a lease," and it was argued on behalf of the plaintiff that such an agreement amounts to a concluded agreement to grant a lease conditional upon the parties agreeing the terms of the lease; but the Court declined to accept this contention, for at the time the letter was written the terms of the lease, some of which were onerous covenants, had not been agreed at all between the parties, and therefore the agreement was too vague to be enforced; but beyond this the judge held that the expression "subject to the terms of a lease" means "subject to the terms of a lease executed by the lessor."

Then the point was taken on the amended pleadings that if the letter of December 29 of

the defendant's solicitor was taken into consideration the two letters taken together constituted the agreement to be enforced, and it was a concluded agreement. Here the most difficult point in the case arises, first, as to whether the solicitors had authority to enter into a contract for their client, which the Court indicated they had not; and secondly, whether as by the two letters the parties had in fact agreed to the terms to be inserted in the lease, the solicitors, in communicating the acceptance of those terms, had signed a memorandum of an agreement made by their client within the meaning of the Statute of Frauds; and on this point, although the Court intimated that the memorandum might be sufficient to satisfy the Statute (Daniels *v.* Trefusis (1914, 1 Ch. 788)), the Judge pointed out that even then the agreement was not the agreement as pleaded as contained in the two letters but another agreement not pleaded and only arrived at and concluded when the defendant himself accepted the final alterations in the draft lease. It is, however, unnecessary, as was stated by the Court, to labour this point, on account of the earlier finding that the defendant never purported definitely to accept the plaintiff's offer, and the whole of the negotiations were "subject to the terms of a lease" which, as stated above, the Court had already interpreted as meaning subject to a lease being executed.

The Court expressed reluctance at having to come to the conclusion that the action must be dismissed because the conduct of the defendant in breaking off the negotiations, when all the terms of the proposed lease had been agreed and letting the premises to someone else, did not commend itself to the Court. To avoid a new trial in the event of a successful appeal the Court assessed the damages at £250 10s., but the action was dismissed with costs.

QUANTITY SURVEYORS' DINNER

THE annual dinner of the Quantity Surveyors' Committee of the Chartered Surveyors' Institution was held at the Hotel Victoria, on Wednesday, December 16, when Mr. Oswald Healing was in the chair. Amongst the large gathering were Sir Cyril Kirkpatrick, Sir John Oakley, Sir Lynden Macassey, Sir Richard Allison, Messrs. P. J. Spencer, E. J. Brown, H. J. Leaning, R. H. Harry Stanger, T. Barron, G. Topham Forrest, G. W. Buchanan, R. L. Roberts, J. E. Bidwell, J. E. Drower, Sydney Tatchell, C. H. Long, C. R. Douglas, R. C. Maxwell, W. Woodbridge Biggs, A. G. White, W. J. Rudderham, G. C. Widdowson, E. Stone Collins, A. G. Cross, R. B. Mann, A. Scott, R. H. Francis, R. F. Maitland, A. R. McFadyen, E. R. Babbs, A. S. Bennison, L. D. Blanc, J. A. Burrell, G. M. Burt, O. Campbell-Jones, Alfred Cox, W. T. Curtis, R. T. Dadson, A. W. Davson, Humphry Deane, J. Emberton, E. B. Glanfield, P. F. Gleed, E. C. Harris, J. J. Joass, E. H. Leeder, R. B. Mann, S. L. Porter, E. J. Rimmer, J. Alan Slater, E. G. W. Souster, T. S. Tait, J. M. Theobald, Maurice E. Webb, P. T. Wilsdon, A. Goddard, secretary, and H. G. Evans, assistant secretary.

After the customary loyal toasts, Mr. Oswald Healing, in proposing the toast of "Architecture, Engineering and the Building Industry," said that in grouping together for that purpose the three great callings of engineer, architect and contractor, he desired to acknowledge and emphasise the essential contribution that each made to the success of the building industry. Specialisation was the rule of to-day, and was the natural outcome of the more complex industrial times in which we lived. The co-operation of architect, engineer, and contractor, each a specialist in his own particular field, was necessary to-day to secure the best results for the building owner. The great changes which had taken place during the last 20 or 30 years in methods of construction, and the improvement in the quality of manufactured materials had made possible the erection of buildings of a character never before attempted. In the case of reinforced concrete and steel frame buildings, for instance, there had been evolved an architectural technique suitable for those particular constructions, which had produced some notable and dignified elevations. Architecture was an art which had its roots in tradition, but those traditions were innovations at one time. So we found that what would yesterday have been heresy to the critics was to-day mere orthodoxy. The engineer had made possible the revolution in building methods by his examination and determination of the scientific principles upon which design of those constructions was based. Thus, valuable work had been done by the Steel Structures Research Committee under the chairmanship of Sir Clement Hindley. The code of practice for structural steel which that committee had produced should go far to remedy the lack of precise knowledge upon which our present building laws were based, and, it was hoped, would eventually lead to their revision. Another committee had just been appointed, with Sir George Humphreys as chairman, to deal with reinforced concrete structures on the same lines, by reviewing the present regulations governing the construction and making recommendations for a code of practice which should embody the best available technical information and the results of recent experience. It might confidently be expected that both these committees, set up by the Department of Scientific and Industrial Research, would recommend the simplification of practice and more efficient and economical design.

The contribution of the engineer to the science of modern building, he added, was two-fold. In the first place, on the purely academic side he had set down the principles which should govern design. Secondly, on the practical side, the engineer's training entitled him to give advice for the solution of those intricate problems of construction which lay outside the scope of the architect's experience. It was becoming more and more the practice for architects to consult engineers in relation to such special structures as deep concrete foundations, retaining walls, and piling. The contractor, too, was indebted to the structural and the mechanical engineer, for the great advance which had been made in recent years in constructional technique.

The building industry was one of the greatest industries in the kingdom, probably standing second only to agriculture, in relation both to the number of men employed and the capital invested. It was estimated that between 250 and 300 million pounds was expended annually through the industry. It employed well over 1,000,000 men, directly or indirectly. Its products, buildings, not only formed the greatest basis of rating in the country, but also represented a necessary capital outlay on which every other industry depended for the successful prosecution of its business. The decisions which had recently been taken by Government Departments and local authorities to curtail building and public works indicated a policy which would undoubtedly have a very serious effect both on the building industry and on the trading public. The estimated cost of schemes which had been postponed or abandoned amounted to nearly £40,000,000. Another equally urgent consideration was that while it was recognised that national economy was a vital necessity, the desired result would not be achieved by cutting down expenditure on schemes which would be revenue-producing or which would contribute to the re-establishment or extension of other industries.

Mr. Sydney Tatchell, in responding to the toast, said he was deputising for Dr. Raymond Unwin, President of the R.I.B.A. One perhaps would assert, he continued, with all the confidence of youth, that architecture could only adequately be expressed in terms of bent wire and glass furniture; whilst another, equally confident, would extol the virtues of horizontal masses of concrete supported apparently by horizontal sheets of plate-glass. Yet another youthful enthusiast would argue that the architecture of to-day should find its expression not in horizontality but in verticality. He would probably use the phrase "modernism," and would enlarge upon colour values. A fourth exponent would combine the efforts of all the others and assert that the only architecture worth having was in the form of a draught-board in which horizontal and vertical lines were equally distributed; that one's colour values could only be obtained by apportioning equal squares of black marble and yellow facing bricks with perhaps a few windows thrown in as makeweight, and that in any case the plan need bear no relation whatsoever to the elevations. Mercifully some architects still clung to tradition, and preferred to build on those foundations which had been laid with such care and skill by the old master craftsmen; and it was to foster and encourage the study and practice of architecture on those, he believed somewhat saner lines, that the R.I.B.A. devoted a very large proportion of its activities. The Chartered Surveyors' Institution, like the R.I.B.A., stood for all that was best in the world of surveying and architecture, and in this work the R.I.B.A. welcomed co-operation and hoped that that co-operation would be even closer in the future. After all, what was architecture? It surely could not be regarded as the expression of planning or design in a world of its own. He preferred to think of architecture as a part, an essential part, of the vast machine of building, affecting for good or ill every individual, class, or community, and it was when regarded in this light that we were able to appreciate how wide and far-reaching was its influence. We must, however, never forget that whilst a competent chartered accountant could run the business side of an architect's office, a qualified engineer look to its structural condition, and the chartered quantity surveyor see to its costing, the architect had to see that the building was beautiful, seemly and fitting.

But the practice of architecture to-day would be quite impossible without the quantity surveyors, and architects frankly admitted their debt for all the difficulties from which the quantity surveyors rescued them and for the help which their skill and knowledge never failed to afford.

Sir Cyril Kirkpatrick, also responding, said that he now recommended people to employ a quantity surveyor. He complimented them on the work they were doing and also congratulated them on the fine chairman they had in Mr. Healing. Mr. R. L. Roberts, also replying to the toast, said the two gentlemen who had responded typified the harmony which existed in the building industry, and the chief characteristic of the industry to-day was co-operation and mutual understanding. Architects, surveyors, builders and building operatives all worked together for the service of the community. The Institute of Builders had inaugurated a scheme of National Certificates. Although examination would not solve all their difficulties, nor provide an automatic or acid test of a good builder, it would give a scientific background and make it easier for a builder to tackle the job in front of him. Mr. Horace W. Langdon, Vice-Chairman, proposed the toast of "The Guests." Sir Lynden Macassey responded. Major-General R. L. B. Thompson proposed the toast of "The Chairman," to which Mr. Oswald Healing replied in suitable terms.

Dinner and Presentation

An interesting function took place in Bristol recently, when the directors and employees of Messrs. John Hare and Co. (Colours), Ltd., Bristol, one of the oldest established paint and varnish manufacturers in the country, gave a dinner in honour of their sales representative, Mr. George McKenna, to celebrate his having completed half a century of work with the company. Mr. T. Day, the managing director, took the chair, and Mrs. Hare presented Mr. McKenna with an illuminated address and cheque.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

QUESTIONS.

Cube of House.

SIR,—I understand that architects generally arrive at the cubic contents of their houses by measuring up to a point half-way up the sloping roof. Now the mean of a triangle is surely through its centre of gravity, one-third the way up the roof. Can you tell me whether this has been overlooked, or whether there is any reason why this discrepancy should be perpetuated?

MATHEMATICS.

Party Drains.

SIR,—I am informed that a drain shared between two properties becomes a sewer to the extent of its joint use and is then repairable by the local authority. Does this apply to a drain passing under a building, and to what extent is the cost of repair payable by the local authority? For instance, suppose such a drain becomes fractured, and to repair it involves taking up valuable parquet flooring, etc.; can the cost of reinstating such flooring and decorations be recovered from the local authority? OWNER.

ANSWERS.

Damp Rot in Bungalow.

[ANSWERS TO "J. M.," DECEMBER 11.]

SIR,—Because rot has been set up by damp conditions people frequently refer to as damp rot what is in essence a form of dry rot, whereas the latter is a more or less inert condition which does not spread beyond the area of dampness. The great height between concrete and floor in this case may be aggravated by the damp course being unnecessarily high above the ground, so that all the containing walls of the space are waterlogged with favourable conditions for fungus. On the other hand, the wood originally used may have contained incipient dry rot before it was fixed, and in spite of ventilation, may have further germinated in stagnant corners. When these conditions arise the ventilation sometimes assists to spread the disease from one place to another. Your correspondent should consult an architect and get the conditions diagnosed. If it is really dry rot, drastic measures of replacement should be adopted and ample hot tar used. DRASTIC.

SIR,—"J. M." should obtain a copy of "Dry Rot in Wood," issued by H.M. Stationery Office, price 1s. 6d.—Bulletin No. 1, Forest Products Research, 1928. He will find it both instructive and helpful. The fungi described are undoubtedly a form of dry rot, and not wet rot, probably incipient in the timber when first used. All oilcloth over the floors affected should be removed.

I have often used mercurial perchloride in solution (one part in 200), but it is very unsafe and poisonous when used by any inexperienced person. "J. M." should get his chemist to dissolve it in a saturated solution and then water down on the site to required strength. Brush on with care; do not inhale, and do not immerse the hands. A blow lamp is a good thing also. The fungi penetrate under slate dampcourses, and deeply into brickwork joints. The only safe treatment is to remove all affected timbers and all traces of such timbers—go over the walls and ground with both lamp and solution, and pre-treat all new timbers with the solution. STATUTORY SURVEYOR.

Old Tiles

[ANSWER TO "BOURNEMOUTH ARCHITECT," DECEMBER 4.]

Messrs. Wheatly & Co., Springfield Tileries, Newcastle, Staffs, write that they displayed at the Building Exhibition, 1930, a type of wall tile somewhat similar to the rebated tile sketched and described by "Bournemouth Architect."—ED.]

Drainage Connection.

[ANSWER TO "COUNTRY," DECEMBER 11.]

SIR,—The local authority has power, by reason of the Public Health Act, 1875, Section 23, Part 3, to enforce the drainage of houses to sewer should such sewer be within 100 ft. of the property. As regards the level of the house your correspondent mentions, the property would not be exempt on that account if within the stipulated distance. The sewage from the property would have to be raised (if necessary) to the proper level by means of a pump or compressed air ejectors, and thence discharged by gravity to the sewer.

H. ALLCROFT.

Water Pipes.

[ANSWER TO "SPECULATOR," DECEMBER 11.]

SIR,—(1) Lead pipe is satisfactory if the water is hard, but should the water be soft, due to amount of calcium carbonate it contains, it would be liable to contaminate the supply, as what is known as the "plumbo-solvent" action is set up, thus causing lead poisoning.

(2) Galvanised iron is, in varying degrees, subject to the above effects also. It is, however, somewhat cheaper but not so durable as lead.

Both varieties can be used for hot water. Iron is more extensively employed, but is subject to "furring up," due to chemical action. Lead has the advantage in that in the event of a burst it is more easily repaired. A much better form of pipe is the tin-lined variety. It costs more, but is free from the disadvantages of the foregoing. H. ALLCROFT.

Right of Light.

[ANSWER TO "CROWN GLASS," NOVEMBER 27.]

SIR,—"Light's" reply to this question is not entirely accurate, and embodies a popular misconception. Twenty years is *not* needed to establish an ancient light. This is admittedly the stated period in the Prescription Act, but since the law also requires any effective obstruction to be made over a period of at least a year, the required time is reduced, in effect, to nineteen years and one day.

ERNEST SEEL, A.R.I.B.A., Dip.Arch. (Leeds).

THE WEEK IN PARLIAMENT

The Land Taxes.

MR. CHAMBERLAIN, Chancellor of the Exchequer, informed members that the Government had given careful consideration to the question of proceeding with the Valuation provided for in Part III. of the Finance Act, 1931. It had been estimated that the total cost of the valuation would be from £1,000,000 to £1,500,000. A certain amount of money had already been spent, but the great bulk of the expenditure was still to come. In the meantime, the need for economy had become paramount, and the Government felt that, in present financial conditions, they would not be justified in incurring further expenditure upon an object which, in any case, could not produce any return for a considerable time. Without prejudice, therefore, to the merits of the plan, which had not been under consideration, the Government proposed to suspend work on the Valuation, and to disperse the temporary staff which had been engaged in connection with it. The necessary legislation would be included in next year's Finance Bill.

The Haig Statue.

BRIGADIER-GENERAL NATION asked the First Commissioner of Works if he would state what the present position was regarding the proposed statue of Lord Haig that was to be erected in London; what was the total estimated cost; and what proportion of this sum had been spent up to date.

MR. ORMSBY-GORE replied that Mr. Hardiman, the sculptor, was now engaged on the full-size figure; the total estimated cost of the statue, excluding the foundations, but including the fees paid to the unsuccessful competitors, is £9,000; the amount paid to Mr. Hardiman to date was £2,150.

Government Building Scheme Dropped.

SIR V. HENDERSON asked the First Commissioner of Works whether, in view of the need for economy, he proposed to proceed with the scheme to erect a large block of Government buildings on the Montagu House site and land adjoining it.

MR. ORMSBY-GORE said that though this scheme would eventually result in considerable economy in the annual cost of housing official staffs in the Central London area, in view of the urgent necessity for restricting capital expenditure as far as possible, it was not proposed to proceed with the scheme at present.

The National Gallery.

MR. CAMPBELL asked the First Commissioner of Works whether he was aware that the lighting scheme of the lately erected western rooms at the National Gallery, containing early Italian pictures, had proved to be a failure, as the public could not see the pictures owing to lack of daylight; and would he obtain expert advice as to whether the structure of the rooms should be remodelled, or whether the daylight lighting of these rooms could be brought up to the standard of the rest of the National Gallery.

MR. ORMSBY-GORE said he was aware that the lighting had been criticised, but the illumination of art galleries was a difficult subject and there were various opinions as to what constituted proper lighting. The gallery was erected in accordance with plans and a model approved by the trustees and the donor, Sir Joseph Duveen. The decorative treatment also was settled directly by the donor in consultation with the trustees. He regretted that he was not in a position, having regard to the need for national economy at present, to authorise further public expenditure on altering the gallery.

Rent Restrictions.

SIR E. HILTON YOUNG stated that the future of the Rent Restriction Acts and any amendments of the Acts would be considered by the Government in the light of the Report of the Departmental Committee which was recently issued. In the meantime, it was proposed to prolong the operation of the present Acts by means of the Expiring Laws Continuance Bill.

On the Expiring Laws Bill, which continues, among other measures, the Rent Restrictions Act, MR. MAXTON moved to discontinue those provisions of the Act of 1920 which enabled an increase of 40 per cent. in rents stabilised under the Act of 1915.

After a prolonged debate, SIR E. HILTON YOUNG, Minister of Health, took the opportunity of making a statement on housing policy generally. He said that there was information now available to show that our housing policy had failed to provide an adequate supply of the lower class of houses to let for the wage-earners. Owing to current financial conditions, if never before, it was now absolutely imperative that we should get full value, from the point of view of social development, for every penny of public money that we spent on houses, and that reconsideration would be necessary for the whole problem in order to secure the absolute extortion, as it were, of full value for our public expenditure under changed conditions. The Government would consider the problem in the single light of the interest of the whole community, in one of the greatest of all interests, an adequate housing supply, and, as a first aim to secure the housing accommodation that the nation needed and as an incidental to that end, a fair deal to the landlord and a fair deal to the tenant.

As to rent restriction, the Government could not deal with the present system by an abrupt and arbitrary interference of the sort proposed in the amendment. He would, however, give the undertaking that the whole matter would receive the prompt consideration of the Government in view of the changed condition of the time. He asked the House not to throw the whole of the administration into confusion by the acceptance of the amendment.

The amendment was negatived by 311 votes to 40.

THE BUILDING TRADE

ESTIMATING: SOME HINTS AND DATA—XXVI

By J. R. TAYLOR.

ESTIMATING: A CAREER.

Comparatively few estimators make their first entry into the building trade with the definite intention of attaching themselves to the estimating side. They serve no apprenticeship or pupilage, and their emergence into the ranks of those whose main occupation is the preparation of estimates depends mainly on chance. It is probably true that considerably more than half the estimates prepared for building work are made up by men who are somewhat difficult to classify. Possibly the term builders' assistants or assistant builders would best fit their status. That this should be so is no bad thing, because the knowledge of the practical side that is essential to good estimating would be very difficult, if not impossible, to acquire in any other way. There is no royal road to the art of estimating.

Many textbooks have been written on estimating, and all that I have ever read have merit; some are better than others, but most have their limitations. Some of the earlier ones were more or less catalogued price lists, compiled from prime cost records, bills of quantities, schedules of prices, and traders' lists, and supplemented by tables and other data gathered from various sources. But the subject was far too large to be successfully handled on these lines. Later authors endeavoured to establish a theory of price-building along scientific lines. This method did offer a considerable advantage in that it left it open to the student and practitioner to correct the prices set down by adjusting them in accordance with market variations in cost of material and differences in operatives' rates of pay, but it had one weakness in that the labour constants used were largely empirical. All estimating stands or falls on the degree of accuracy attained in regard to the labour constant to be employed with each and every price. Nothing is more inconstant than the labour constant, and, consequently, though a ready-made built-up price may at times be of considerable assistance to an estimator, it has always to be corrected and brought into accord with circumstance. This can only be done by bringing to bear on it one's own experience, as well as the experience of others, and may even then fall short for want of being handled with intuitive insight and grasp.

As, therefore, so much depends on the personality of the estimator, and on the nature of the training he receives, it may have some general interest, and at the same time prove useful to the aspirant, to outline briefly the usual lines of development. A beginner commonly enters a builder's office straight from elementary or secondary school, though some few are apprenticed to one or other of the crafts and become estimators by reason of experience gained later on in managing work as foremen. The office, however, offers the earliest opportunity for practice and a better insight into many important matters bearing on costs, and particularly on detail costs. We will, therefore, take our ambitious youngster along that road. To begin with, he will have little choice, because even after he has passed through the errand-running period, others will decide what for the time being he can be most usefully employed upon. We must assume him to possess and to have shown some aptitude for figures. For some time he will assist the prime cost clerk by abstracting time sheets, squaring up mill-boards and similar work, and his first bow to estimating will be made when he is required to extend and cast a priced bill of quantities. This will go on for a longer or shorter period, the duration of which will depend almost entirely on his own efforts. If he shows any marked ability, coupled with cheerful good will, his immediate chiefs will entrust him with tasks of greater difficulty.

It is at this stage that he will make his own choice as to his future. To fit himself for advancement in any capacity he will have attended evening classes at one of the technical schools, and have taken at least a reasonably good pass in an examination on advanced building construction at the end of, say, three years. To do this so he will have acquired a certain amount of knowledge of drawing, but this will not mean that he can design. Drawing will later be very useful, but it is not the side that he should press. Rather he should endeavour to repress any notion that he is an architect merely because he can draw as well as some other pupil who, with a cribbed plan, has built for some misguided client a bungalow or garage, and flourished his authorship on the plans submitted to the local authority. What he should be doing is getting ready to take a course of quantity surveying. He will have seen and perhaps assisted in builders' quantities taken at the office, and will know that they are seldom anything like so fully detailed as those supplied by the quantity surveyor. And for the very reason that he sees the estimator making do with these rough quantities, he may fall into the error of supposing this to be all that is necessary. This mistake is far too common, and is one that is shared by not a few architects, and even by some builders who should know better. Rough quantities are very dangerous in the hands of all but very experienced. They should never be prepared by an estimator who could not, when given the time, prepare fine quantities taken in proper form.

Our young estimator-to-be must, therefore, learn how to take proper quantities, and in the majority of cases this means either a correspondence course or private tuition. The fees and books will make a considerable hole in his savings, and he may have to forego many pleasures natural and becoming to his age, but it is the quickest way into the higher-paid ranks. He has, in any event, chosen a life of hard work, but he will find that it has its compensations. When he has taken this course, and not until then, he should keep his eyes open for an opportunity of showing what he can do. Long before this period has been reached he will have fitted into the general office routine and have been assigned an ever-increasing number of duties. He will have been out with the estimator, measuring up extras and omissions on completed works, and may possibly have been solely entrusted with such jobs as measuring up against sub-contractors. He should have learned how to make out a reasonably accurate list of materials required for a job in the country, for which it would not be convenient to hold up supplies pending foremen's orders. In this work he may be presented with an opportunity, because it is never safe to take the bills of quantities as they stand and reduce them into lists of materials to be supplied. What is wanted is accurate lists to exact lengths, sizes and volumes without waste or surplus, and, above all, without shortages that may involve expensive delays before being made good. When preparing these lists, he should compare them with the quantities, but not base them on the quantities. All discrepancies should be noted in whichever direction they tend, and be brought to the notice of the chief estimator, who will appreciate the effort made, though at first he may have to point out a fair number of errors.

Having by these and other methods shown that some confidence can be placed in him, he should endeavour to obtain permission to try his hand on a small job. Perhaps a plan for a porch, a bay window or a garage may have come along, and there may be no great need of haste in regard to it. If he can obtain leave to take it home with him, he now has a real chance. Let him take it very seriously and go through the entire process of bringing it to bill in proper form. Taking off, squaring up, abstracting and billing should all be done with as much precision as though it concerned a contract for thousands of pounds. When completed it should be handed in unpriced; it would be an impertinence to hand it in with prices attached unless asked to do so. If this effort escapes any very damaging criticism, the young estimator will probably soon know that it has been appreciated by finding himself withdrawn from other duties to a considerable extent, and that most of his time is spent in the estimating department.

It would, however, be a great mistake to think that he may now relax in regard to study, though much of it may consist of nothing but continuous reading. It is ridiculous to assume that a piece of work can be valued accurately without an intimate knowledge of the processes to be gone through for the purposes of obtaining the desired results. It is true that, with the aid of tables and textbooks, one may divide it into its component parts as regards material, and may have a labour constant suggested as suitable to average conditions. But unless one knows a good deal about it, how is one to decide whether the conditions may be rightfully regarded as average? Take a given job that is to be tendered for by several builders, all of about the same standing and all desirous of securing the work. Assume the estimates to be based on quantities, and the work to be all plain and straightforward and of a type with which all the competitors are fully familiar. Some close estimating might be expected, and would probably result. Next, assume that in a job of about the same size there are several features not so commonly met with, and that at one or two points materials will be used in a manner that is not customary in the district. The desire for the work may still be the same, but the resulting tenders be widely separated. What has happened to lead to this result is that, though all the estimators have obtained quotations for the material, each has differed in his estimate of the labour. It is just as likely that the top price is the most nearly accurate as the bottom one is, but it is possible that all may be quite wrong.

The estimator is always faced with difficulties in regard to his pricing, but the more he studies the fewer will be the occasions on which he is completely stumped and reduced to guessing rather than reasoning. Our young estimator should, therefore, now cultivate a liking for serious reading. At first he is not unlikely to find textbooks rather dry, but after a time he will find himself so well repaid by knowledge gained that, rather than miss his daily acquisition, he will resort to a trade catalogue, and find therein a mine of useful information. When studying for his building construction examinations he necessarily gained some knowledge of construction in each of the main trades. But that is not nearly sufficient for the purpose of good estimating. He should take them all over again as presented by writers claiming to have special knowledge in each branch. This may seem a "tall order," but all life is before him, and, if he reads hard until he is fifty it will probably dawn on him that what he then knows is but a molehill on which to stand when claiming notice of his stature.

I must not be understood to be insisting on such close study as to leave no room for recreation. Far from it, for I believe that a man who works hard should play hard. It is necessary that study should be accompanied by relaxation. But the estimator will find that, though he travels a road that is hard and long, it is a road of joyous adventure. Mastering a craft that is also an art, he

travels in good company. Trained to look for the whys and wherefores of building in order that he may correctly value them, his outlook on things in general is thereby widened. Knowing truth as a jewel with many facets, he is not content to view any matter from only one angle, and he thus gets closer to realities. Looking back over a period of over forty years, I have seen the estimator gain professional status by specialising in one direction. Let the young estimators keep in front of them the fact that theire is an art as well as a craft, and they will yet win to equal recognition.

(Concluded.)

LAND VALUATION

The decision of the Government to suspend work upon the valuation of land under Part III of the Finance Act will be received as, at any rate, a reprieve from a most vexatious form of Government intervention involving the subject in great expense, and considering the press of business and the short time at its disposal, the Government is to be congratulated on having taken this step. The Chancellor of the Exchequer explained that the merits of this scheme of taxation had not been under consideration by the Government, and that financial conditions and the paramount need for economy were the reasons which had led the Government to come to this decision. We trust, however, that when time permits, the present Government will give early consideration to the merits and demerits of this scheme, for it has to be borne in mind that so long as the threat of this taxation, especially in the form it has taken in the Finance Act, is hung over the heads of the owners of land, the Act will exert a prejudicial effect on enterprise just at the moment when individual enterprise is most needed. It is not as though this Act related only to that unknown element, increment value, as, to some extent, did its predecessor of 1909-10, but it directly taxes improvements executed by the owners themselves, and therefore so long as it remains unrepealed it will hinder building and development. The most flagrant example of this is possibly the taxing of the land without exemption or allowance for the money expended on making the roads—a serious matter in connection with all building estates; but this is only one example out of many. The Act of 1909-10, it is hardly now disputed, had a most disastrous effect on building enterprise, although that Act in many respects was fair compared with the present Act, and the late Government turned a blind eye to this fact as they exempted the local authorities and other public bodies (the class of enterprise they favoured) from its operation. We have recently shown the very important part played by private enterprise in housing, and it would be most unfortunate if private enterprise in this direction received a fresh check at this time, and the taxation of land in some respects complicates the question of town and country planning.

The land taxation proposals were passed through Parliament in a very unusual form, since a time limit has been imposed on the passing of the Finance Bills, a limit which did not exist in 1909-10; discussion was hurried and had to be checked by every Parliamentary expedient, and it is certain that if the proposals were submitted to the present Parliament they would be negatived, and we further doubt whether if the constituencies were consulted they would find any favour. Moreover, under present conditions of currency and exchange when the pound is off the gold standard and all values are uncertain, how could any true value for taxation purposes be attached to the land?

NEW BUILDINGS IN LONDON

Acton.—School.—E.C. has passed a recommendation that a school for 200 children be erected in Noel-road.

Barking. — Additions. — Messrs. Taylor Walker and Co., Ltd., brewers, are having additions made to the "Thatched House" beerhouse, Ripple-road.

Battersea.—Garage.—The L.C.C. has received an application by Major H. P. G. Maule, 12, Stratford-place, W.1, for consent to the erection of a garage in front of the late St. George's Vicarage, Battersea Park-road.

Bermondsey.—Rebuilding.—The Licensing Sessions have approved the application for the rebuilding of the "George" beer-house, Tower Bridge-road. The work is to cost £7,000.

Brondesbury. — Alterations. — To the branch post office for H.M.O.W. have been entrusted with Messrs. Soole and Son, Ltd., Dunstable Works, Richmond.

Charing Cross-road. — Improvements. — Messrs. A. Edmonds and Co., Ltd., of Constitution-hill, Birmingham, have secured the contract for shopfitting work at premises in Charing Cross-road, W.C.1.

Holborn. — Reconstruction. — The fourteenth-century Hall of Barnard's Inn, in Holborn, which has been for some years incorporated with and occupied by the Mercers' School, is in process of reconstruction. It has been decided to take the building down and re-erect it, retaining as much as possible of its original parts. Mr. Dendy Watney, the surveyor to the Worshipful Company of Mercers, 3, Frederick's-court, E.C.4, is in charge of the work.

Islington.—Building.—Mr. E. C. P. Monson, F.R.I.B.A., Finsbury Pavement House, 120, Moorgate, E.C.2, has been appointed architect by the Islington B.C. for the erection of a sub-station building in Berners-road. The work is estimated to cost £2,050.

Limehouse. — Tenements. — A tender of £8,146, from the Eastern Construction Co., 241, Romford-road, E., is recommended for acceptance by the Stepney Council for the erection of Block 11 of the Limehouse Fields Improvement Scheme. Plans for these tenements have been prepared by the Borough Engineer, Municipal Offices, Raine-street, E.1.

Limehouse. — Extensions. — The Stepney Borough Council is to invite tenders immediately for an extension to the Limehouse Electricity Station. Plans have been prepared by Mr. B. J. Belsher, F.R.I.B.A., Borough Engineer and Surveyor, Municipal Offices, Raine-street, E.1.

London. — Superstructure. — Messrs. Trollope and Colls, Ltd., 5, Coleman-street, E.C.2, have secured the contract for the superstructure of the General Post Office (South), for H.M.O.W.

Oxford-street. — Extensions. — The first stage in a big extension of the Oxford-street stores of Messrs. Selfridge & Co. has been started. The firm have acquired the chief part of a block of buildings bounded by Duke-street, Wigmore-street and Orchard-street. Mr. A. D. Miller, 475, Oxford-street, W.1, is the architect, and the demolition work is being carried out by Messrs. H. Sabey & Co., of South Wharf, Paddington, W.2. No building contract has yet been settled.

Paddington.—Building.—The B.C. has received an application from Mr. P. E. Culverhouse, F.R.I.B.A., architect to the Great Western Railway, for consent to the erection of a two-story building abutting upon Waverley-road.

Poplar.—Flats.—The Housing Committee of the B.C. have recommended £34,092 for 48 flats and 2 cottages in Judkin-street and Roffey-street. The Borough Surveyor has prepared the plans and will be responsible for the work.

Richmond. — Hall. — Messrs. Jarvis & Richards, A./F.R.I.B.A., 8a, Lower Grosvenor-place, S.W.1, are the architects for a new drill hall for the Territorial Army Association of Surrey. No building contracts have yet been let.

Stepney.—Library.—An inquiry is to be held by the Ministry of Health into the Stepney Borough Council's proposal to raise £5,193 for the completion of the extension of the Limehouse Public Library.

Wembley.—School.—The Middlesex C.C. has recommended the estimate of Messrs. W. J. Dickens, of Ealing, W.5, for the erection of a secondary school in Carlton-avenue, Wembley Park. The County Architect is Mr. W. T. Curtis, F.R.I.B.A., 10, Gt. George-street, S.W.1, and the work is estimated to cost £44,990.

Wood Green.—Buildings. — The Underground Railways have placed an order with Messrs. Prestige and Co., Ltd., Cambridge Wharf, 149, Grosvenor-road, S.W.1, for the construction of station buildings at Manor House, Turnpike-lane, Wood Green, Bounds Green, and Arnos-grove, on the Southgate extensions.

NEW CINEMAS

Glasgow.—Plans for the erection of a cinema at Calder-street, Govanhill, Glasgow, have been passed by the Dean of Guild Court. To hold 1,200, plans have been prepared by the architectural staff of Messrs. Cowieson's, Ltd., Charles-street, St. Rollox, Glasgow.

Kingston-on-Thames.—The Kingston Picture House, Ltd., have appointed Messrs. Marshall and Tweedy, FF.R.I.B.A., of 4, Cavendish-place, Cavendish-square, W.1, and Colonel J. E. Adamson, L.R.I.B.A., of 56, Victoria-street, S.W.1, to act in conjunction as their architects for the erection and completion of a new super cinema at High-street, Kingston-on-Thames. Quantities for tendering have not yet gone out.

Newcastle-on-Tyne.—The lessees of the Festival Hall site in Prudhoe-street propose to erect a cinema on the land. Plans for the new building, which will hold 2,000 people, have been completed, and the actual expenditure will probably be about £30,000. Mr. Jack Joynson, of Messrs. Joynson and Loughton, is one of the lessees.

Oxford.—Plans submitted by Mr. G. T. Gardner, F.R.I.B.A., 7, St. Aldate's, Oxford, of the proposed building of the cinema, Cowley-road, have been approved by the Oxford T.C.

DIARIES FOR 1932

"Think of the New Year and you will think also of a diary!" If this sentiment springs to our mind, then it is because this season of the year is always linked in our minds with these valuable accessories—not to mention calendars. Messrs. Charles Letts and Co. send us a selection of their diaries—as usual beautifully produced and universal in their range—in which there is something to appeal to everyone. To-day the cry is "Business first," and here the popular Scribbling Diaries make an immediate appeal to the architect and constructor. The size, 12 in. by 8 in., will prevent its being mislaid and gives a generous space to each day, the sheets being interlined with blotting paper. Contained is a classified list of British merchants, manufacturers, shippers, etc. Similar in everything but size is the 8 in. by 5 in. Diary. For personal use there is a tremendous range. There are several types whose speciality is economy in size and thickness, but there are also special diaries for the business man, the wireless enthusiast, the poultry-keeper, the A.A. motorist, and so on. These diaries have one thing in common: Economy in price. They are diaries of which the possession of one is a first essential.

We acknowledge with many thanks the receipt of diaries or calendars from the following firms:—Messrs. Braithwaite and Co. (Engineers), Ltd.; the Ironite Co., Ltd., and W. W. Sprague and Co., Ltd.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1931.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Accrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aldershot	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/1½
Alfreton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Alnwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Altrincham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashford (Kent)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/1½
Ashington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ashton-under-Lyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aylsham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/1½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bedford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Berwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bexhill	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Birkenhead	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Birmingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bishop Auckland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackburn	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackpool	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/1½
Bolton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bournemouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bradford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bradford-on-Avon	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/1½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0
Brentwood	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/1½
Bridlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Brighton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bristol	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromsgrove	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bromyard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Bungay	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Burnley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Burton-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury St. Edmunds	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Buxton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Cardiff	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Carlisle	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chesterfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chorley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cirencester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Clacton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Colchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Coventry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cranbrook	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cromer	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Darlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Deal	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Denbigh	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Derby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Devizes	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Dewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Doncaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Durham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Eastbourne	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
E.Glam.(Mon.Val.)	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ely	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Exeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gloucester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Godalming	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Goole	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Gosport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grantham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gt. Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Grimsby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Guildford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Halifax	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harpenden	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Harrogate	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hartlepools	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hatfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hednesford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hereford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Herne Bay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Huddersfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hull	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hunstanton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huntingdon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Isle of Wight	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ipswich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Keighley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Kettering	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kidderminster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kings Lynn	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lancaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington Sp	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leicester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leighton Buzzard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Littlehampton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Liverpool	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
London—								
12 m. radius	1/8	1/8	1/8	*	1/8	1/8	1/7	1/3
12-15 m. radius	1/7½	1/7½	1/7½	*	1/7½	1/7½	1/6½	1/2½
Loughborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lowestoft	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Luton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Macclesfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Manchester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Mansfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Matlock	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Melton Constable	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Melton Mowbray	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Merthyr Tydfil	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Middlesbrough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newcastle-on-Tyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newcastle-u-Lyme	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
New Forest	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newport, Mon.	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Northampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Norwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Nottingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nuneaton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Paignton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Peterborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Plymouth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Pontypridd	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Portsmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Preston	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Redditch	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Reigate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Retford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ripon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rochdale	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Saffron Walden	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Saxmundham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Scarborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sittingbourne	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
South Shields	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stockton-on-Tees	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stoke-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourbridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stowmarket	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Stratford-on-Avon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swaffham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Swansea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Tamworth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Thetford	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Torquay	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsall	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsden	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warminster	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Warrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wells (Norfolk)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Welwyn Gar. City	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
West Bromwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Weston-sup-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Whitby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wigan	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Winchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Windsor	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wisbech	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wolverhampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Woodbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worksop	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worthing	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wrexham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wycombe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wymondham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st February, 1931, is 1/10½ per hour.

For Building Trade wages in Scotland, see page 1058.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address of the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor S.; Engineer, E

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

DECEMBER 28.

Kingussie.—Housing.—4 houses with 3 rooms and 2 houses with 4 rooms at Kingussie, for T.C. John Rankine, B.S.

London.—Cleaning, Painting, etc.—At various hospitals, for L.C.C. Clerk, County Hall, Westminster Bridge, S.E.1. Dep. £1.

Oakham.—Cottages.—8 in village of Cottesmore, for R.D.C. E. Hollis Farrant, clerk, 6, Market-place.

Pocklington.—Housing.—4 non-parlour houses in parish of Sancton, for R.D.C. A. J. Oliver, clerk, Dep. £2 2s.

Walsend.—Houses.—(a) 30 houses in flats on Archer-st. re-housing estate, and (b) 4 houses in flats, Albert-st., Howdon, for T.C. B.S. Dep. £2 2s.

DECEMBER 29.

Galway.—Hospital.—New district hospital at Clifden, County Galway, for Commissioner acting as the Galway Board of Health and Public Assistance. F. Gibney, architect, 16, Westmoreland-st., Dublin. Dep. £5 5s.

Keighley.—Installation.—Of low-pressure hot-water apparatus and electric light at Technical College, for West Riding C.C. Education Officer, County Hall, Wakefield.

Kent.—Building.—At New Place Farm, Ickham, near Canterbury, for C.C. Charles J. Elgar, architect, Bank-chambers, Wingham.

DECEMBER 30.

Edinburgh.—Building.—136 3-apartment houses, comprising 1st development of Saughton housing scheme and alterations at foreman's house, lighting and cleansing depot, Balcarres-st., for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Glasgow.—Repairs.—Works of roof repairs, etc., at 184-194, Saltmarket. D. Stenhouse, T.C.

Kilgevrin.—Houses.—Three houses and three out-offices on lands of Kilgevrin, Co. Galway, for Irish Land Commission. M. Deegan, secretary, Upper Merrion-st., Dublin. Dep. £1.

Southampton.—Houses and Roads, etc.—For the Corporation. Town Clerk, Municipal Offices. Dep. £3 3s.

DECEMBER 31.

Ambleside.—Housing.—12 non-parlour type houses and construction of about 60 yds. of roadway, 36 ft. wide, and laying of sewers, etc., on Blue Hill Housing scheme, for U.D.C. C. L. Gregson, S. Dep. £2 2s.

Biggleswade.—Alterations.—To houses at Stotfold, for R.D.C. J. O. Jones, 192, Drove-rd.

Bishops Stortford.—Alterations.—And additions at Haymeads Institution, for the Herts C.C. Clerk, Public Assistance Office, Hertford. Dep. £5 5s.

Caversham, Reading.—Post Office Garage.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Fife.—Housing.—9 blocks each of 4 houses of 3 apartments (type "A") and 3 blocks each of 4 houses of 2 apartments (type "Y"), a total of 48 houses in all, for C.C. George B. Deas, architect, Central-chambs., Kirkcaldy. Dep. £1 1s.

Margate.—Fencing.—1,114 lin. yds. or thereabouts of wrought-iron fencing and three double gates, for T.C. B.S., 40, Grosvenor-place.

Upper Whitley.—Repairs.—Head teacher's house at Council school, for West Riding E.C. L. J. Blackburn, Education Offices, 8, St. John's North, Wakefield.

JANUARY 1.

Bradford.—Demolition.—Of "Victoria Inn," for T.C. N. L. Fleming, T.C.

Chippenham.—Housing.—38 houses of 3 and 2 bedroom non-parlour type houses; 34 houses of 3 and 2 bedroom non-parlour type houses, on west and east sides of Woodlands-rd., for T.C. B.S., High-st. Dep. £5 5s.

Dorset.—Cottages.—Pair of semi-detached cottages at Holding No. 4, Corfe Mullen, Dorset, for the C.C. County Architect, County Offices, Dorchester.

JANUARY 2.

Evesham.—Houses.—On the Rynal housing site. Town Clerk, Municipal Offices. Dep. £2 2s.

Halifax.—Garage.—Omnibus garage, Elm Wood, for C.B. A. C. Tipple, B.E., Crossley-st. Dep. £2 2s.

Reigate.—Painting.—Also decorating work at schools, for E.C. B.S.

West Ham.—Heating, etc.—(a) Romford-rd. baths, and (b) mental hospital, Goodmayes, for C.B. J. Roger Preston, consulting heating engineer, 10, Talbot-mansions, Museum-st., W.C.1. Dep. £1 1s. each.

JANUARY 4.

Bakewell.—Painting.—Internal painting at institutions, for Derbyshire C.C. County Architect, County Offices, Derby.

Beaconsfield.—Houses.—36 non-parlour and 8 parlour type houses on Amersham-rd. housing site, for U.D.C. J. H. Crosby, E. and S. Dep. £3 3s.

Belper.—Painting.—Internal painting at Poor Law Institution, for Derbyshire C.C. County Offices, Derby.

Cardiff.—Depot.—New parcels depot, booking office, and other works, at general station, for the directors of the G.W.R. Co. Engineer, Paddington Station, W.2. Dep. £2 2s.

Doncaster.—Shed.—New cow shed at Manor Farm, Thrybergh, and new store at Thrybergh reservoir, near Rotherham, for C.B. F. Oscar Kirby, Water E.

Gt. Yarmouth.—Store.—New buoy store and dwelling and for various structural alterations, at Trinity Depot, for Corporation of Trinity House. M. K. Smith, Secretary, Trinity House, Tower Hill, London, E.C.3. Dep. £1.

JANUARY 5.

Birmingham.—Building.—Medical superintendent's office, visitors' waiting-room, lavatory accommodation, etc., at West Heath Sanatorium; new mortuary, pathological and post mortem block at Selly Oak Hospital; provision of heating installation, hot and cold water, steam, gas and fire hydrant services, for T.C. F. H. C. Wiltshire, T.C. Dep. £2 2s. each.

Pembroke.—Cottage.—Caretaker's cottage adjoining Solva Congregational Chapel. W. H. John, secretary, Solva

Portsmouth.—Flats.—(a) 30 flats in York-pl., Portsea, and (b) 12 flats in Britain-st., Portsea, for T.C. R. J. Jenkins, City E. Dep. £3 3s.

Wakefield.—Houses.—22 small houses, for T.C. Percy Morris, Housing Architect.

JANUARY 6.

London.—Heating.—Accelerated low-pressure hot water heat at (a) "Valentine" telephone exchange, Ilford; (b) County Court, Shoreditch, for H.M.O.W., Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Wakefield.—Housing.—12 houses at Middlestown, for R.D.C. W. E. Massie, E. and S.

JANUARY 7.

Bradford, Yorks.—Employment Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Southampton.—Additions.—Alterations and additions to Fawley Beacon, Southampton Water, for Harbour Board. E. Cooper-Poole, engineer, Harbour Offices, Town Quay. Dep. £2 2s.

JANUARY 9.

Preston.—School.—Holme Slack junior and infants' school, for C.B. W. Platt, B.E. and S. Birley-st. Dep. £2.

JANUARY 11.

Bolton.—Houses and Flats.—On the Cameron-st. (No. 2) estate, for the Corporation. Town Clerk, Town Hall. Dep. £2 2s.

Bolton.—Shops.—On the Cameron-st. estate, for the Corporation. Town Clerk, Town Hall. Dep £2 2s.

Epsom.—Wiring.—Electrical installation for wiring, for U.D.C. H. W. Watts, Electrical Engineer, Electricity Works.

London.—Building.—Demolition of existing buildings and construction of diesel engine house, new weighbridge house and entrances, drainage and contingent works at Brixton pumping station, Waterworks-rd., Brixton-hill, S.W., for M.W.B. Chief Engineer, 173, Rosebery-av., E.C.1. Dep. £10.

Richmond.—Hall.—New drill hall, for Territorial Army Association of Surrey. Jarvis & Richards, A. & F.R.I.B.A., 8a, Lower Grosvenor-pl., Westminster, S.W.1.

JANUARY 12.

Dublin.—Rebuilding.—Of National Maternity Hospital, Holles-st., for Governors. W. H. Byrne & Son, architects, 20, Suffolk-st. Dep. £10 10s.

Hornchurch.—School.—Council school at Rainham-rd., for Essex C.C. Jno. Stuart, F.R.I.B.A., County Architect, Chelmsford. Dep. £2 2s.

JANUARY 13.

Deptford Bridge, S.E.10.—Convenience.—For the Deptford B.C. Town Clerk, Town Hall, New Cross, S.E.14. Dep. £1 1s.

JANUARY 14.

Kendal.—Abattoir.—Public abattoir buildings at Sandylands, for T.C. F. W. Oxberry, B.S. Dep. £2.

JANUARY 15.

Sheffield.—Sorting Office.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

JANUARY 20.

Cranwell.—Heating.Accelerated low-pressure hot water heating, etc., at Royal Air Force College, for H.M.O.W., Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JANUARY 21.

Cork.—Hall.—New city hall and municipal offices on site at Albert-quay, for Corporation. Jones & Kelly, architects, 17, South Frederick-st., Dublin. Dep. £10 10s.

Elland.—Repairs.—To Mirfield Knowl council school, for West Riding E.C. G. Dodgson, Education Office.

JANUARY 25.

Carlisle, Padiham and Kearsley.—Site Works, etc.—For Central Electricity Board. Secretary, Trafalgar-bldgs., 1, Charing Cross, S.W.1. Dep. £2 2s.

Portishead and Upper Boat.—Site Works, etc.—For Central Electricity Board. Secretary, Trafalgar-bldgs., 1, Charing Cross, S.W.1. Dep. £2 2s.

MARCH 1.

Uruguay.—Slaughterhouse.—Large slaughterhouse and plant, for Frigorifico Nacional. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10927.)

NO DATE.

Lancashire.—Station.—New police station at Orrell, near Wigan, for C.C. Stephen Wilkinson, F.R.I.B.A., 16, Ribblesdale-pl., Preston. Dep. £2.

***Scotton Banks (near Knaresborough).**—Sanatorium.—For the West Riding C.C. J. Charles McGrath, County Hall, Wakefield. Dep. £5.

MATERIALS, etc.

DECEMBER 28.

Bournemouth.—Cement.—For T.C. F. P Dolamore, B.E.

Devon.—Road Materials.—For C.C. B. S. Miller, clerk, The Castle, Exeter.

DECEMBER 30.

Croydon.—Whinstone setts.—For C.B. B.E.

DECEMBER 31.

Derbyshire.—Road Materials.—For C.C. C. G. Millican, C.S., St. Mary's-gate, Derby.

Rhondda.—Builders' Materials.—For U.D.C. E. Taylor, E. and S.

JANUARY 1.

Glasgow.—Lime.—For T.C. D. Stenhouse, T.C.

JANUARY 4.

Lindsey (Lincs).—Road Materials.—For C.C. A. G. Bradshaw, C.S., Newland, Lincoln.

Soke of Peterborough.—Granite, etc.—For C.C. H. Russell, C.S., Cross-st., Peterborough.

West Riding.—Road Materials.—For C.C. West Riding Surveyor, County Hall, Wakefield.

JANUARY 5.

Dover.—Tar.—For T.C. W. Boulton Smith, B.E.

Dover.—Granite Chippings.—For T.C. W. Boulton Smith, B.E.

London.—Pipes, etc.—For G.W.R. F. R. E. Davis, secretary, Paddington Station, W.2.

JANUARY 6.

Leeds.—Highway Materials.—For T.C. E. W. Cookerlyne, Highways E., 155, Kirkstall-rd.

London.—Highway Materials.—For Wandsworth B.C. D. A. Nicholl, T.C.

JANUARY 7.

London.—Granite, etc.—For St. Pancras B.C. E. W. Swinstead, B.E. and S.

Norfolk.—Highway Materials.—For C.C. S. H. Warren, C.S., Norwich.

JANUARY 9.

Blackburn.—Builders' Materials, etc.—For C.B. H. M. Webb, B.E.

JANUARY 12.

Leeds.—Setts.—1,500 tons of granite paving setts, for T.C. Chairman, Tramways and Transport Committee, Tramways Office, Swinegate.

JANUARY 15.

London.—Bricks, etc.—For Islington B.C. Chief Electrical Engineer. Electricity Works, 60, Edengrove, Holloway, N.7.

JANUARY 16.

Dorset.—Road materials.—For C.C. C.S., Dorchester.

JANUARY 18.

London.—Highway Materials.—For Camberwell B.C. W. Bell, B.E. and S.

JANUARY 22.

Farnborough.—Road Materials.—For U.D.C. J. E. Hargreaves, E. and S.

JANUARY 23.

Grimsby.—Road materials.—For R.D.C. J. B. Wikeley, E. and S.

ENGINEERING, IRON AND STEEL.

DECEMBER 28.

Pickering.—Sewerage.—4,000 lin. yds. of stoneware pipe sewers 15 in. to 16 in. in dia., and about 200 yds. of 12 in. and 6 in. dia. cast iron pipe sewers, together with manholes, ejector and compressor station, etc., and of sewage purification works comprising detritus tanks, sedimentation tanks, percolating filters, humus tanks, storm

water tanks, sludge beds, pump house, effluent channels, effluent sewer, etc., for U.D.C. Henry Smith, E., 36, Burgate. Dep. £5.

Wokingham.—Reservoir.—Mass concrete reservoir at Bearwood Hill, for R.D.C. J. S., Alford, 11, Victoria-st., Westminster. Dep. £5.

DECEMBER 29.

Hornchurch.—Culvert.—Reconstruction of culvert and part of Slewins-lane, for U.D.C. F. Alderson, S.

DECEMBER 31.

Brigg.—Mains.—2,800 yds. 3-in., 1,600 yds. 4-in., 1,200 yds. 6-in. and 50 yds. 7-in. cast-iron water mains, a pumping station with engines and pumps, and reinforced concrete water tower for U.D.C. Silcock & Simpson, engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £5.

Lisnakea.—Bridges.—Two ferro-concrete bridges—east and west crossings—with other collateral works (Contract No. 3), over Upper Lough Erne, for Fermanagh C.C. J. P. Burkitt, C.S., Enniskillen Dep. £3 3s.

Ormskirk.—Sewerage.—Sewerage work for sewage disposal works at Lathom and Burscough, for U.D.C. H. B. Ward, consulting engineer, 26, North John-st., Liverpool. Dep. £3 3s.

Stockport.—Pipes.—6,250 tons of cast iron pipes and specials, from 4 in. to 30 in. dia., together with few lengths of steel-flanged pipes, 12 in. and 15 in. dia., for Goyt Valley scheme, for Corporation. G. H. Hill & Sons (Manchester), civil engineers, 40, Kennedy-st., Manchester. Dep. £3 3s.

Wrexham.—Sewerage.—Construction of sewerage and sewage disposal works and other works, in connection for R.D.C. J. H. Edwards, E., Imperial-buildings. Dep. £10.

JANUARY 1.

South Molton.—Reservoir.—Covered concrete reservoir, for T.C. B. Turnbull, B.S., 1, East-st. Dep. £3 3s.

JANUARY 4.

Golborne.—Sewage.—Sewage disposal works at Golborne, for U.D.C. C. J. Lomax & Son, chartered civil engineers, 37, Cross-st., Manchester

London.—Rebuilding.—Rebuilding and strengthening of granite parapet of river wall in front of Grosvenor-rd. and Pimlico-gdns., rebuilding at higher level of granite coping and railings in front of Grosvenor-rd. and consequent alterations to footway paving in Grosvenor-rd. and Pimlico-gdns., for L.C.C. Chief Engineer, Old County Hall, Spring-gdns., S.W.1. Dep. £2.

Newcastle.—Swimming pond, for U.D.C. Ferguson and McIlveen, engineers, 36, Scottish Provident-buildings, Belfast.

JANUARY 6.

Axminster.—Tanks.—Sewer outfall and tanks adjacent to foreshore at Beer, for R.D.C. Lewis and Lewis, engineers, 15, Victoria-st., Westminster, S.W.1. Dep. £1.

JANUARY 11.

Birmingham.—Reconstruction.—Steel and concrete of superstructure of roving bridge over canal arm to Corporation Wharf, Cheston-rd., Aston, for T.C. H. H. Humphries, City E. and S. Dep. £2.

JANUARY 12.

Durham.—Footbridge.—Lattice girder footbridge over River Tees at Cotherstone, for C.C. William J. Merrett, C.E. and S., 43, Old Elvet, Durham.

Kincardine-on-Forth.—Steelwork.—For bridge, for Joint Committee of C.C.'s of Stirling and Clackmannan. Sir A. Gibb & Partners, engineers, Queen Anne's-gate, S.W.1. Dep. £10 10s.

JANUARY 13.

Wincanton.—Water Supply.—For Penselwood, for R.D.C. Aubrey J. Allen, E., Half Moon-st., Sherborne. Dep. £5.

JANUARY 16.

Glasgow.—Girders.—Steel plate girders and cross girders required for three bridges to carry the 48-in. syphon pipes over Aberfoyle to Glasgow-rd., near Balfron Station; L. & N.E. Railway at Balfron Station; and River Endrick, about 1½ miles from Balfron Station, for T.C. Geo. Henshilwood, Engineer and Manager, Water Department, 50, John-st., Glasgow, C.1.

JANUARY 18.

Barking.—Tanks.—Joint pumping station storm-water tanks, storm-water outfall and appurtenant works at Barking, for Borough of Ilford and Borough of Barking. W. H. Radford and Son, engineers, Albion-chams., King-st., Nottingham. Dep. £5 5s.

Dunblane.—Waterworks.—Additional filters, meter house, etc., at Kippenrait, for T.C. Warren & Stuart, engineers, 94, Hope-st., Glasgow. Dep. £2 2s.

JANUARY 20.

Middlesex.—Sewerage.—Main sewers of brickwork, concrete and cast-iron segments for West Middlesex main sewerage, for C.C. Dodd & Watson, engineers, Wellington House, Bennetts-hill, Birmingham. Dep. £5 5s.

FEBRUARY 18.

Cairo.—Waterworks.—For Egyptian Ministry of the Interior. Department of Oversea Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10962.)

ROAD, SEWERAGE, AND WATER WORKS.

DECEMBER 28.

Beddington and Wallington.—Making-up.—Of Green-lane, South Beddington, for U.D.C. S. F. R. Carter, E. & S., 42, Woodcote-rd., Wallington. Dep. £2 2s.

Beotle.—Main.—Laying of about 910 lin. yds. of 5 in. cast-iron water main, together with necessary stop valves, hydrants and air valves, and other incidental works at Hill parish of Millom; also taking up, reconditioning and relaying about 870 yds. of 3 in. cast-iron pipes in same parish, for R.D.C. W. Britton Jones, S., Millom, Cumberland. Dep. £2 2s.

Felixstowe.—Making-up.—Of St. Edmund's-rd. for U.D.C. H. Clegg, S

Fife.—Mains.—For laying and jointing about one mile of 4 in. dia. and half a mile of 3 in. dia. water main and executing other relative works, for Fife C.C. Bruce and Proudfoot, civil engineers, 63, Nicol-st., Kirkcaldy. Dep. £1 1s.

Isle of Wight.—Water Supply.—Supplying and laying about 1½ miles of 3 in. dia. cast-iron water main from Porchfield to Whitehouse and Rolls Farm, in parish of Northwood, Isle of Wight, together with valves, hydrants and works, for R.D.C. W. E. Blizard, E., Castle-lane, Southampton. Dep. £2 2s.

Isle of Wight.—Water Supply.—Supplying and laying about 1,475 yds. of 6 in. dia. spun-iron water main at Brighstone, together with valves, hydrants and works incidental thereto at Brighstone. for R.D.C. W. E. Blizard, E., Castle-lane, Southampton. Dep. £2 2s.

London.—Surfacing.—Tar surfacing 70 miles of roads, for Islington B.C. R. H. Jerman, T.C.

DECEMBER 29.

Andover.—Sewerage.—700 yds. of 15 in. dia. cast-iron and stoneware pipe sewer, together with manholes and other works incidental thereto, for T.C. G. A. Clark, B.S. Dep. £1 1s.

DECEMBER 30.

Merton and Morden.—Surfacing.—Cannon Hill-lane, section 2, between Grand-drive and Parkway, for U.D.C. G. Jerram, E. and S. Dep. £1.

Weymouth and Melcombe Regis.—Resurfacing.—Of Rodwell-rd. and Preston-rd., for T.C. R. W. Vine, B.E. and S.

DECEMBER 31.

Bumpstead.—Water supply.—2,700 and 1,140 yds. of water main, for R.D.C. H. B. Thake, S., 10, High-st., Haverhill.

Kingston-upon-Thames.—Reconstructing.—Various sections of county roads, for T.C. B.S. Dep. £2 2s.

Surbiton.—Making-up.—Of Green-lane, for U.D.C. S Dep. £1 1s.

Uxbridge.—Sewerage.—6,000 yds. of 9 in. 1,000 yds. of 12 in., and 500 yds. of 15 in. dia. sewers and appurtenant works, at Harefield, Ickenham and Hillingdon East, for U.D.C. E. R. T. Bolton, E., 263, High-st. Dep. £2 2s.

Walton-on-Thames.—Making-up.—Of Cromwell-rd. (part of), for U.D.C. R. Wilds, E. and S. Dep. £1 1s.

JANUARY 1.

Plymouth.—Ballasting.—About ¼ mile of roads and 1½ miles of sewers, at Barne Barton housing estate, St. Budeaux, Devonport, for T.C. J. Wibberley, C.E. Dep. £2 2s.

JANUARY 2.

Cannock.—Sewer.—Provision and laying of 427 lin. yds. of 12-in. dia. cast iron sewer, the construction of manholes and other works in connection therewith, at Cannock-rd., Heath Hayes, provision and laying of 667 lin. yds. of 9 in. dia. cast iron sewer, with hatch-boxes, and other works in connection therewith, at Pye Green, Hednesford, for U.D.C. R. Blanchard, E. and S. Dep. £2

JANUARY 4.

Hayes and Harlington.—Sewers.—2½ miles of concrete and stoneware sewers, varying in dia. from 6 in. to 36 in., together with manholes and other works incidental thereto, for U.D.C. E. A. Sandford Fawcett, E., 53, Victoria-st., Westminster, S.W.1. Dep. £5 5s.

Slough.—Making-up.—Of Burlington-av., for U.D.C. A. Bromly, E.

Southampton.—Making-up.—Of Pitt-rd., Mill-rd. and Claremont-cres., for C.B. B.E. Dep. £1 1s. each.

JANUARY 5.

St. Helens (I. of W.).—Sewer.—Laying 125 ft. of 12 in. cast-iron sewer outfall below low water mark at Seaview, I. of W., for St. Helens U.D.C. C. Pursey, S.

JANUARY 6.

Hove.—Making-up.—Roadway, providing and laying new granite kerbing and channelling and artificial stone slab paving, and other works in connection therewith in Holmes-av., for T.C. T. R. Humble, B.S.

London.—Paving.—Of Combemartin-rd., Southfield, and Hoadly-rd., Streatham, for Wandsworth B.C. E. J. Elford, B.E., 215, Balham High-rd., S.W.17. Dep. £1 1s.

Watford.—Sewerage.—5,200 lin. yds. of stoneware pipe, concrete pipe and cast-iron pipe, soil and surface water sewers, varying in size from 30 in. to 9 in. dia., together with manholes and other appurtenant works, for T.C. W. W. Newman, B.E. Dep. £5 5s.

JANUARY 7.

Leeds.—Paving.—Kerbing, flagging, tar paving Hesketh-rd., Hesketh-pl., Hesketh-av., Hesketh-terr., Morris-view, Morris-grove, Bk. Manor-terr., East Moor-rd. (part), and kerbing, tar paving footpaths and carriageway in Farm-hill (part) on Heanwood housing esate, for T.C. Highways Engineer, 155, Kirkstall-rd., Leeds.

Slough.—Sewers.—1,000 yds. approximately of 9 in. dia. stoneware pipe sewer, with manholes and incidental works, in Red Lion-rd. and Shaggy Calf-lane, for U.D.C. A. Bromly, E.

Twickenham.—Making up.—Of Elmsleigh-rd., for T.C. G. E. King, B.E. and S. Dep. £2 2s.

JANUARY 9.

Isle of Thanet.—Making-up.—Of Seaview-rd.; Sea View-av.; Grenham Bay-av.; St. Mildred's-av., for R.D.C. G. L. Butterworth, S. Dep. £2 2s.

Penge.—Road.—Road improvement works in Anerley-rd., for U.D.C. Col. H. W. Longdin, S. Dep. £1 1s.

JANUARY 11.

Congleton.—Pipes.—2,000 tons of cast iron regular pipes and specials, for Odd Rode and district water scheme, for R.D.C. H. Lapworth, E., 25, Victoria-st., S.W.1. Dep. £2.

Ilkeston.—Pipes.—370 tons of cast iron regular pipes and specials of 16 in. and 14 in. dia., for T.C. H. Lapworth, E., 25, Victoria-st., Westminster, S.W.1. Dep. £2.

JANUARY 12.

Doncaster.—Sewerage.—In Chequer-rd. and Childers-st., for C.B. F. Oscar Kirby, B.E., 2, Priory-place. Dep. £5 5s.

Kincardine-on-Forth.—Foundations.—Also piers, approach spans, roadway, fendering, etc., for new bridge, for C.C.s of Stirling and Clackmannan. Sir A. Gibb & Partners, Queen Anne's-gate, S.W.1. Dep. £10 10s.

Leeds.—Reconstruction.—Of certain streets, for T.C. Secretary, Tramways Office, Swinegate, Leeds.

JANUARY 13.

London.—Making-up.—Of Fairweather-rd. and mews rear of Stoke Newington High-st., for Hackney B.C. P. Holt, B.E. and S. Dep. £1 each.

Sutton and Cheam.—Drainage.—Laying, construction, completion and maintenance of concrete tube surface water sewers all in open cut, together with manholes and appurtenant works, for U.D.C. Wm. Hedley Grieves, E. and S. Dep. £3 3s.

Public Appointments

JANUARY 2.

Norwich.—Chief Architect. City Engineer. Guildhall.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Ampthill.—R.D.C. decided to apply to M.H. for sanction to 36 houses.

Aylesbury.—T.C. approved: 12 houses, Tring-rd., H. C. Janes, Ltd.; sub-station, Cubitts Old Works, Hannen & Cubitts.

Barking Town.—T.C. considering extensions to isolation hospital.—Alterations to municipal kitchen at £100.—Plans passed: Additions to petrol depot, River-rd., British Oil Storage Co., Ltd.

Birmingham.—Public Health Committee recommend: proposal to alter and improve main block at Selly Oak Infirmary, and to apply to M.H. to borrow £12,040 to cover cost.—E.C. recommend: subject to approval of B.E. and M.H., proposal to provide additional accommodation at Paget-rd. Council school, be approved, at £25,100.—Committee also recommend, subject to approval, additonal accommodation at Dolphin-lane Council school, at £5,450.—Subject to approval, E.C. to borrow sum required to cover additional cost involved in provision of Hamilton-rd. special school.—Subject to approval, E.C. propose alterations at Metallurgical Department of Central Technical College, at £2,800.

Blaydon-on-Tyne.—To serve housing estates in Scotswood and Denton Burn areas, Co-operative Society propose branch premises.

Bolton.—T.C. approved: W. E. Yates, 6 houses, Orchard-av., and 4 houses, Thorns-rd.

Bournemouth.—T.C. approved: alterations and additions, Wesleyan Church, Poole-rd., the trustees; alterations, "Berkeley Hall Hotel," Cliff Cottage-rd., E. Helyar; 4 houses, Redbreast-rd. North, J. Kay.

Bradford.—Licensing Justices approved alterations, "Painter's Arms," Drighlington.—T.C. propose conveniences adjacent to Tonge-st. Cottage Baths. City Architect.

Bridlington.—T.C. approved: C. L. Waite, 56 bungalows, new road, east side of Fortyfoot-rd., W. H. Witting.

Brighton.—T.C. approved: 22 houses and amending 27 houses, Widdicombe-way, Bevendean, Braybons, Ltd.; rebuilding hotel, etc., "King and Queen," Marlborough-place, Edlins, Ltd.; 13 houses and new street plan, Downs View-av., Woodingdean, W. H. Clark.

Bury.—J. Chadwick, B.S., prepared plans for 450 houses, Huntley Fold estate.

Buxton.—T.C. propose electricity sub-station, H. Bishop, Borough Electrical Engineer.

Carlisle.—Board of Governors of Carlisle and County High School for Girls propose additions.

Carlisle.—T.C. approved: alterations, Nelson-st., Denton Holme Conservative Club, per H. E. Scarborough; 8 houses, London-rd., J. Millar, per Benwell & Slack.

Carlton.—M.H. held inquiry into application of U.D.C. for demolition orders in four clearance areas.

Cheadle.—Electricity Committee propose electricity sub-station, Burntwood Hall estate.—Roberts & Wood, F.F.A.S., 26, King-st., Manchester, preparing plans for 53 houses and bungalows on Baxter Park estate, Gatley, for Wm. Barrell & Son, 36, Ilkley-st., Moston, Manchester.

Chester.—Plans been prepared for reconstruction of Christleton canal bridge, cost £9,500.—C.B. approved lay-out for Dodd & Pate, for 50 houses at Quarry Bridge, Christleton.—Council resolved that City S. be authorised to erect temporary footbridge in Sealand-rd. over Finchetts Gutter, at £150.—Plans passed: 28 houses, Roberts-lane, Saltney, W. W. Noble.

Chesterfield.—W. A. Derbyshire, architect, Glumangate, Chesterfield, prepared plans for additions to premises in Station-rd., New Whittington, for S. Simms & Sons, Ltd.

Colne.—T.C. to construct station in Skipton-rd.

Darlaston.—U.D.C. propose 12 houses and plans to be prepared for laying out land for housing site off Willenhall-st. Architect, C. W. D. Joynson.

Dudley.—Midland Counties Mutual Benefit Approved Society propose offices at Priory-rd. A. T. Butler, architect, 31, Priory-st.

Dundee.—Proposed new police headquarters at £52,000. D. R. MacLay, Dundee City Architect.

Ellesmere Port.—Ellesmere Port and Whitby U.D.C. instructed to prepare lay-out plan for Chester-rd. housing estate and Whitby-park, and erection of 75 houses on Grange Farm estate.

Featherstone.—U.D.C. approved plans for additions to Adult School, Featherstone-lane.

Fleetwood.—Rev. J. McKenna, of St. Wulstan's, proposes public elementary school on Poulton-rd. for about 120 children. Plans by R. Mercer, architect, 11, Chapel-st., Preston.

Flintshire.—Mental Deficiency Act Committee to adapt premises of Broughton P.A. Institution.

Glasgow.—New school, by E.C., at Knightswood. James B. Wilson, Son & Honeymoon, architects, 92, Bath-st.

Glasgow.—Reconstruction scheme and new shops, etc., at Central station, for L.M. & S. Rly. Co.

Goldthorpe.—U.D.C. propose alterations to Welfare Hall, estimated cost £1,400.—Salvation Army authorities proposing assembly hall in Straight-lane with seating accommodation for 360 persons, at £1,500.

Heywood.—T.C. approved: S. Barker, 8 houses, Barker-st.—W. H. Lawton, layout for 29 houses, Bamford.

Horbury.—U.D.C. propose 28 houses, construction of roads and sewers at Westfield-close. W. Sugars, S. Cost £8,464.

Ipswich.—T.C. granted lease of aerodrome site to Brian Lewis & Co., Ltd.—Approval given to principle of erecting new school on Gainsborough estate at £8,000.

Keighley.—Members of Keighley branch of British Legion propose social club. R. P. Broster & Sons, architects, Craven Bank-chambers. Cost £2,000.

Lancashire.—Lancashire County E.C. propose central school.—E.C. propose branch library at Little Lever.—E.C. is to acquire "Greetby House," Greetby Hill, Ormskirk, for conversion as School Clinic and Child Welfare Centre. Cost £1,400. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston.

Leamington Spa.—Contract been entered into by Leamington Slum Clearance, Ltd., for 42 houses and flats on Tachbrook-rd. site.

Leeds.—J. C. Proctor, A.R.I.B.A., 40, Clarendon-rd., preparing plans for church room at Bramhope Parish Church.

Leicester.—Trustees of St. Ann's Church, Western-pk., proposing church. Plans by A. F. Brian, A.R.I.B.A., St. Martin's-chambs., 8, New-st.

Lochee.—Plans prepared for court for new workshops, etc., for T. Yale, at High-st. N. T. Stewart, architect, 64, Reform-st., Dundee.

London (Battersea).—B.C. recommend following works be executed by Works Department: Central reference library, additional electric heating apparatus, £113 10s.; Morden Cemetery, repairs to boundary fence, £238 5s. 3d.

London (City).—Corporation recommend £300 as grant to Governors of St. Bride Foundation towards expenditure on swimming bath and other necessary work at institute.

London (Hammersmith).—B.C. approved: T. Coghill, 257, Goldhawk-rd., four additional garages; J. Thorn & Sons, 25, Granville-gardens, garages at rear

London (Paddington).—Proposals, together with preliminary plans, been submitted to B.C. by G.W.R. Co. in connection with alteration to Bishop's-rd. bridge.

Macclesfield.—A. Boon, builder, Croft Gravel-lane, Wilmslow, acquired site off Oxford-rd., as housing estate.

Manchester.—W. Linthwaite, 78, Lansdown-rd., West Didsbury, propose gospel hall adjoining Kingsway and Burnage-lane.—L.M. & S. Railway to prepare plans for bridge under railway at School-lane and Parrs Wood-rd. South, East Didsbury. Cost £7,000. Chief Engineer, A. Newlands, Euston, N.W.1.—A. Hartley & Son, 51, Bridge-st., to extend shopping centre at Mauldeth-rd., West Withington.—Roberts & Wood, architects, 26, King-st., Manchester, preparing lay-out and plans for developing land at Wilton Park estate, Crumpsall, for W. J. Davies. 128 houses are proposed.—W. Barrell & Sons, 36, Olkley-st., Moston, 6 houses, Halstead-grove and Penrhos-av., Northern Etchells; Threfall's Brewery Co., Ltd., alterations to the "Royal Oak" hotel, Barlow Moor-rd., Chorlton-cum-Hardy; Lord's Estates, Ltd., builders, Wallshaw-st., Oldham, 25 houses, off Cringle-rd. and Hill Crest-drive, Levenshulme; C. Oldham, jun., 27, Rothsay-rd., Crumpsall, 48 houses off Royle Green-rd., Holly-way and Marylon-rd., Northenden; T. Fogarty & Co., Dyson-st., Cheetham, 7 houses, Grange Park-rd., Blakeley; A. W. Bulley, builder, 21, Didsbury Park, East Didsbury, 56 houses, off Rushford-st., Trust-st. and North-rd. and Granger-av., Longsight; W. H. & G. T. Froggatt, 5, Clive-st., Failsworth, 28 houses, Aobory-av., Moston; G. W. Thompson, 32, Gaskell-st., 6 houses, Derbyshire-rd., Newton Heath; Littler & Rich, Hellingdon-rd., Edge-lane, Stretford, 8 houses, Morville-rd., Chorlton-cum-Hardy.

Matlock.—Rev. C. Cossins, of St. Joseph's, propose parochial hall.

Middlesbrough. — Residence known as "Grey Towers" been presented to T.C. for adaptation as sanatorium. S. E. Burgess, B.E.—Erimus Quoit Rifle and Social Club to extend premises. Archibald & Archibald, 26, Albert-rd., architects, but contract not been placed.

Newcastle.—Housing Committee instructed property surveyor to obtain tenders for 570 houses on St. Anthony's estate.

Newcastle-on-Tyne.—Plans by Hetherington & Wilson, County-chams., Westgate-rd., Newcastle, for rebuilding of "Lord Wharncliffe Hotel" been approved, but no contract placed.—Liddell & Bachelor, 12, Eldon-sq., prepared plans for warehouse, for Saville Property Co., Ltd., North-st.—Alterations to the "Black Furnace" hotel. S. H. Lawson, Emerson-chams., architect.—Tenders not yet invited for nine shops and garage in Gallowgate. J. Oswald & Sons, 2, Worsick-st., architects.—Blayton C.W.S. decided to erect premises in Scotswood and Denton Burn area.

Norwich.—T.C. adopted recommendations of E.C. by which sites on Mousehold House and North Earlham housing estates be appropriated as sites for schools.

Oldham.—The Oldham Corporation propose 30 houses on Honeywell-lane site, off Belgrave-rd., Oldham. Plans by B.S.—The Parochial Council of St. Mark's Church propose alterations and improvements to day school buildings. Fred Thorpe, F.R.I.B.A., architect, Union Bank-chambers.

Oxford.—T.C. recommend £1,400 and £750, for constructing new public conveniences at Cowley and Headington respectively.—Council are proposing a clearance scheme in St. Aldate's area.—Sanction received from M.H. to borrow £21,507 for extensions to Municipal buildings.—Housing committee agreed to appropriate for educational purposes land on Quarry Fields estate.—Plans passed: Warehouse at rear 53, London-rd., Headington, R. Rowland, 55, London-rd., Headington; new residence, Manor-rd., Governors, Radcliffe Infirmary and County Hospital; 11 motor-houses, 5-22, Ridgeway-rd., L. J. Davies & Co., South Wales; additions to museum, Parks-rd., Oxford University, Chest; 6 houses, Fernhill-rd., Artisan Building Co., Swan-lane, Coventry; 24 houses, Fern Hill-rd., Ives & Rushby, Coventry; additions to office buildings, 1a, Soutmmoor-rd., Hutchins & Son.

Plymouth.—T.C. received M.H. sanction to borrowing £15,870 for 30 houses and 16 flats at Vicarage-rd., St. Budeaux.

Preston.—T.C. decided to construct two chimney stacks at Ribble power station.

Retford.—T.C. considering houses in Lidgett-lane.

Richmond. — Messrs. Wetherall & Dent, LL.R.I.B.A., High Row-chambers, preparing plans for alterations to shop and café premises in High Row.

Romford.—R.D.C. recommend that surveyor be directed to proceed with preparation of plans for 32 houses fronting Wennington-rd. and Lambs-lane, Rainham.—Plans were: 6 houses, 5 St. Mary's-lane, and No. 4, Bridge-av., Upminster, F. J. Vincent; 6 houses, Meadow-way, Upminster, A. Kind.

Rotherham.—J. W. Bailey, 51, Frederick-st., acquired site, corner of Badsley Moor-lane and Arnold-rd., on Herringthorpe housing estate, for shopping centre.

Rothley.—Co-operative Society, Ltd., Rothley, near Leicester, acquired a site opposite "Wheatsheaf Inn," on Leicester-rd., Thurlaston, for branch premises. Plans by G. Sharp, architect, "Westbrook," Rothley.

Sheffield.—Alterations and improvements to St. Joseph's R.C. school (Rev. A. G. Kay). Cost £1,000.—Board of Management of City General Hospital propose making extensions to buildings. Plans by W. G. Davies, F.R.I.B.A., City Architect. —Court of Governors of the Sheffield University propose provision of hostel accommodation for students.

Sheffield.—Members of St. Swithun's Church proposes parochial hall, Manor estate.—Congregational Association acquired site, Shiregreen estate, for church.

Shrewsbury.—T.C. adopted scheme for extension of public abattoir at £6,765.

Skegness.—Council adopted scheme for augmenting water supply of town. Scheme to cost £14,970.

Southend-on-Sea. — C.B. approved: 6 houses, Glendale-gardens, H. A. Mowle; 8 houses, Earls Hall-avenue, B. Greenbaum & Son; 16 houses, Vardon-drive, W.·A. Walker; 6 bungalows, Vardon-drive, W. A. Walker; garage, Lydford-rd. & Station-rd., Lydford Motors, Ltd.

Southport.—Westminster Bank, Ltd., Lothbury, London, E.C.2, propose branch at Hillside, Birkdale. Plans by A. Sutcliffe, F.R.I.B.A., 413, Lord-st.

South Shields.—W. Duncan & Co., Ltd., to carry out alterations to premises, Stanhope-rd.

Sunderland.—Sanction to borrow £620 towards widening railway bridge in Stockton-rd., been received by T.C.

Swansea.—C.B. approved land for 6 houses at Lon Coed Bran, for D. Griffiths.—Plans passed: 7 houses, Hadland-terr., West Cross, Geo. Symons; 9 houses, Baglan-st., A. E. Wright; rebuilding 57 and raising the roof of 56, Woodfield-st., Warren Jones.—Council resolved that Borough Architect be asked to report on progress made in preparation of plans, specifications, etc., for new branch library building at Oystermouth.—Borough Architect submitted plans for modernising of latrines, at £670, at Dunvant Council school.

Taunton.—Housing Committee has asked T.C. for sanction to borrow £2,560 for purchase of additional land adjoining Wedlands housing estate in Cheddar-rd.

Wakefield.—T.C. approved: Kay & Lunan, 2 houses, Dewsbury-rd., for J. Caton, and 10 houses in Eden-av., for J. Caton.

West Ham.—T.C. approved: Store, Prince Regent Wharf, North Woolwich-rd., Burt, Boulton & Haywood, Ltd.; sub-station, John-st., Jas. W. J. Townley.

Wexford.—C.C. consented to proposal of County Board of Health to borrow £9,000 for completing Gorey garden city scheme.

Wigan.—Corporation approved: 7 houses and 2 houses with shops in Warrington-lane, G. E. Hall.

Working.—Plans approved: H. Pallant, 2 pairs of semi-detached houses, Guildford-rd., Chobham.

York.—T.C. approved: F. M. Dixon & H. Williamson, 8 houses, sites 9 to 16, Millfield-lane; Bishop of Middlesbrough, house, Fifth-av.; Leeds Permanent Building Society, additions, 8, New-st.

York.—T.C. recommended that plans submitted by City E. for lay-out of houses suggested to be erected on Huntington-rd. estate be sent to M.H. for approval.

*See also List of Contracts, Competitions, etc.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

PRINCIPAL CHANGES OF THE WEEK.—No changes are recorded this week.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Fletton, at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Bo. Bullnose	9 15 0
Do., Bullnose	3 5 3	Blue Wire Cuts	7 5 0
White Midhurst Facing Bricks (delivered London site)			5 0 0

Best Stourbridge Fire Brick:—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One Side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours Hard Glaze £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. „ „	2 4	4 in. „	3 6

	s. d.	
Thames Ballast	8 0 per yd	delivered 2 miles radius Paddington
Pit Sand	11 0 „ „	
Thames Sand	11 0 „ „	
Best Washed Sand	11 6 „ „	
¾ in. Shingle for Ferro-Concrete	8 6 „ „	
½ in. „	11 0 „ „	
¼ in. Broken Brick	10 6 „ „	
Pan Breeze	8 0 „ „	

Per ton delivered in London area in full van loads.
Best Portland Cement. British Standard Specification. Test £2 2 0 to £2 4 0 35s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 7 6
Vitocrete „ „	0 7 6
Super Cement (Waterproof)	12 0
Ciment Fondu (F.O.K. Works)	4 15 0
Roman Cement	3 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
„ „ Pink	5 10 0
Plaste ,Coarse, Pink	3 0 0
„ White	3 12 6
„ Fine	5 12 0
Sirapite, Coarse	3 9 0
„ Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 10
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft. cube	3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road wagons at above stations, perjft. cube	4 5½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.	
CHILMARK—RANDOM BLOCK—	
At Nine Elms, per ft. cube	3 11
HOPTON-WOOD STONE—	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P. ft. cb.	14 0
Sawn two sides „	22 6
Sawn three or four sides „	27 0
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London	
6 in. sawn two sides landings to sizes (under 20 ft. super) per ft. super	6
6 in. rubbed two sides, ditto „	6 0
3 in. sawn two sides slabs (random sizes „	3½
3 in. to 2½ in. sawn one side slabs (random sizes) „	1 6½
1½ in. to 2 in. ditto, ditto „	1 3½
HARD YORK—	
Delivered at any Goods Station, London.	
Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto „	6 1½
6 in. sawn two sides slabs (random sizes) „	2 1½
3 in. ditto ditto „	2 10
2 in. self-faced random flags Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 10	3 × 6	£17 0
4 × 9	20 0	3 × 11	19 10
4 × 8	20 0	2 × 11	19 10
4 × 7	18 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	16/-	1¼	25/-
¾	17/-	1½	27/6
1	20/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.	Inches.	per sq.
1	21/-	⅝	15/-
1¼	26/-	¾	16/6
1½	27/6	1	20/-

ins. BATTENS. s. d. — SAWN LATHS. s. d.
¾ × 2 ..... per 100 ft. 2 0 — Per bundle 2 3

1 INCH AND UP THICK.
Average price for prime quality.

	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	£4 10 0 to —
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.

	Per 1,000. f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	£5 2 6
ditto hand-made ditto	5 7 6
Ornament 1 ditto	5 12 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	⅞ in. to 2¾ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Genuine Staffs. Iron.	Fittings. ⅛ in. and under.	Over ⅛ in.	Flanges. ⅛ in. and under.	Over ⅛ in.
	%	%	%	%	%	%
Gas	62½	50	45	47½	55	57½
Water	58½	46½	40	42½	50	52½
Steam	55	42½	35	37½	45	47½
Galv. gas	50	37½	35	37½	45	47½
Galv. water	45	32½	30	32½	40	42½
Galv. steam	40	27½	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft. Pipe.		Bends, stock angles.	Branches, stock angles.
2 in. plain	1/2½	9½d.	1/2
2½ in. „	1/3	10½d.	1/4
3 in. „	1/6½	1/1½	1/8½
3½ in. „	1/11	1/4½	1/11½
4 in. „	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works Bends, stock Branches.

	Pipe, angles, stock angles.		
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 1½	1 6½	1 10½
2½ in. „	2 6	1 8½	2 4
3 in. „	2 8	1 10½	2 9½
3½ in. „	2 10½	2 6	3 3
4 in.	3 3	2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works Bends, stock Branches.

	Pipe, angles, stock angles.		
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	3 6	4 3	6 8

	cwt. qr. lbs.		
4 in. „	1 1 20	4 9	5 2	8 10
5 in. „	1 2 22	6 3	9 0	14 3
6 in. „	2 0 6	6 11	10 11	18 1

Gaskin for jointing 41/- per cwt.

	Per ton in London.					
	£	s.	d.	£	s.	d.
IRON—						
Common bars	10	10	0	to	11	0 0
Staffordshire Crown Bars Good merchant quality	10	15	0	to	11	10 0
Staffordshire Marked Bars	14	0	0	...	15	0 0
Mild Steel Bars	9	10	0	...	10	0 0
Steel Bars, Ferro-Concrete quality, basis price	8	0	0	...	9	0 0
Hoop iron, basis price	11	0	0	...	12	0 0
„ Galvanised	27	0	0	...	28	0 0
Soft Steel Sheets, Black—						
Ordinary sizes, to 20 g.	11	0	0	...	11	10 0
„ „ „ 24 g.	12	0	0	...	13	0 0
„ „ „ 26 g.	14	0	0	...	15	0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13	10	0	...	14	10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14	10	0	...	15	10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17	10	0	...	18	10 0
No. 1 quality £4 per ton extra.						
Flat and Galvanised Corrugated Sheets—						
Ordinary sizes 6 ft. to 9 ft. to 20 g.	13	0	0	—	14	0 0
Ordinary sizes 6 ft. to 9 ft. to 22 g. and 24 g.	14	10	0	...	15	10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16	10	0	...	17	10 0
Sheets Galvanised Flat, Best quality—						
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18	0	0	...	19	0 0
Best Soft Steel Sheets, 22 g. and 24 g.	20	0	0	...	22	0 0
Best Soft Steel Sheets, 26 g.	21	10	0	...	23	0 0
Cut Nails, 2 in. to 6 in.	15	0	0	...	16	0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	23 10 0
Pipe in coils	24 0 0
Soil pipe	27 0 0
Compo pipe	27 10 0
NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.	
Old lead, ex London area, at Mills per ton	£13 10 0

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	0 9½
Strong sheet „	0 10
Thin „	0 11
Copper nails „	1 0
Copper wire „	0 11

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 76/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz

RIVER PATTERN SCREW DOWN MAIN FERRULES.
½ in. ¾ in. 1 in.
39/6 60/- 116/6 per doz.

CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
7/6 11/- 17/- 29/- 36/- 63/- per doz.

BRASS SLEEVES.
1¼ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.
1¼ in. 1½ in. 2 in. 3 in.
8 lbs. P. traps ... 35/- 41/- 56/- 101/- per doz.
8 lbs. S. traps ... 35/- 45/- 66/- 126/-

TIN.—English Ingots, 1/4 per lb. SOLDER.—Plumber's 8d., Tinmen's 9d., Blowpipe 10d. per lb.

*The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*cont.*)

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil, in pipes ..... per gallon ...	0	2	0
" " " in barrels ... " ...	0	2	2
" " " in drums ... " ...	0	2	5
Boiled " " in barrels ... " ...	0	2	6
" " " in drums ... " ...	0	2	8
Turpentine in barrels	0	4	9
" in drums (10 galls.) " ...	0	4	11
Genuine Ground English White Lead, per ton	47	10	0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganwyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots. £ s. d.
per ton delivered ... 63 10 0
Red Lead, Dry (packages extra) ... per ton 33 0 0
Best Linseed Oil Putty ..... per cwt. 0 13 6
Min. XD quality ..... firkn. 0 3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.
15 oz. fourths ... 2½d.	32 oz. fourths	7½d.
15 " thirds ... 3½d.	32 " thirds	9½d.
21 " fourths ... 3½d.	Obscured Sheet, 15 oz.	3½d.
21 " thirds ... 4½d.	" " 21 oz.	4½d.
26 " fourths ... 4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d.
26 " thirds ... 7½d.	Em'lled, 15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

	Per foot. s.	d.
"VITA" GLASS.		
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2	6

VARNISHES, &c.

	Per Gallon. £	s.	d.
Oak Varnish ..... Outside	0	14	0
Fine ditto ..... ditto	0	16	0
Fine Copal ..... ditto	0	18	0
Pale Copal ..... ditto	1	0	0
Pale Opal Carriage ..... ditto	1	4	0
Best ditto ..... ditto	1	12	0
Floor Varnish ..... Inside	0	18	0
Fine Pale Paper ..... ditto	0	18	6
Fine Copal Cabinet ..... ditto	1	2	6
Fine Copal Flatting ..... ditto	1	0	0
Hard Drying Oak ..... ditto	0	18	0
Fine Hard Drying Oak ..... ditto	0	19	6
Fine Copal Varnish ..... ditto	1	0	0
Pale ditto ..... ditto	1	12	6
Best ditto ..... ditto	1	2	6
Best Japan Gold Size	0	12	0
Best Black Japan	0	10	0
Oak and Mahogany Stain (water)	0	12	0
Brunswick Black	0	7	0
Berlin Black	0	14	0
Knotting (patent)	1	5	0
French and Brush Polish	0	17	0
Liquid Dryers in Terebene	0	9	0
Cuirass Black Enamel	0	7	0

OBITUARY

Mr. C. J. Longley.

The death has taken place of Mr. Charles James Longley, head of the well-known building firm of J. Longley and Sons, Ltd., Crawley. This firm has been in part responsible for the development of the town. Among the more notable buildings erected by them are Christ's Hospital, King Edward VII Sanatorium, at Midhurst (at the opening of this Mr. Charles Longley was personally congratulated by the King), and Graylingwell Hospital. Many churches have been erected by the firm, who have just completed work on the historic Buckfastleigh Abbey, and many of the stations on the Brighton line were erected by them.

A Builders' Merchant's Estate.

Alderman Herbert Williams, of Farley Lynches, Luton, builders' merchant, left £117,671, net personalty £25,364. He gave £1,000 to the Bute Hospital, London.

THE SCOTTISH BUILDER

NEW BUILDINGS

Dumbarton. — HOUSING. — The County Council has agreed, on a recommendation of the Public Health Committee, that 150 new houses be built at an approximate cost of £55,000 on the Admiralty estate at Alexandria. It was also agreed to erect 28 houses at Condorrat, at £10,390, and eight additional four-apartment houses at Croy, estimated at £3,050.

Dundee.—BUILDINGS.—Plans and sections of the following proposed new buildings, etc., have been lodged at the office of the City Engineer:—Forthill-road—dairy premises for Messrs. Alexander Keay and Sons. Mr. T. Lindsay Gray, architect, 2, India-buildings. Lethnot-street—garage for Mr. Henry Jobson. Mr. T. Lindsay Gray, architect. Queen-street, Broughty Ferry—washhouse, etc., for Messrs. D. and W. Thomson. Mr. T. Lindsay Gray, architect. Seagate—hall for the Loyal Order of Ancient Shepherds. Messrs. Thoms and Wilkie, architects, 21, South Tay-street. Strathmartine-road—bungalows for Mr. W. Black. Mr. W. M. Patrick, architect, 26, Yeaman-shore. Baldovan estate—new streets between Kingsway and Muirfield-crescent, for Sir Herbert K. Ogilvy, Bart.

Dundee.—EXTENSION.—The Governors of Dundee Royal Infirmary have decided on a £5,300 extension to the Dalgleish Nurses' Home.

Edinburgh.—EXTENSIONS.—The Managers of the Edinburgh Royal Infirmary have, in regard to the Infirmary extension scheme, decided to instruct their own architect, Mr. T. W. Turnbull, to prepare the necessary plans, and to carry out the architectural work, and have also appointed a consulting architect with experience in hospital construction work to act as consultant and adviser to the Board in connection with the scheme.

Glasgow.—BUILDINGS.—The Dean of Guild Court has passed the following:—Glasgow Royal Mental Hospital, Gartnavel—alterations to east block buildings; British Linen Bank, St. Andrew-square, Edinburgh—new bank premises at Kilmarnock-road and Campsie-road, Merrylee; Scottish Widows' Fund Life Assurance Society, West George-street, Glasgow—alteration to premises; Trustees of Elder Cottage Hospital—nurses' home at Drumoyne-drive, Govan; Mactaggart & Mickel, Ltd., Bath-street, Glasgow—four shops at Castlemilk-road, Glasgow.

Milngavie. — HOUSING. — Milngavie Town Council has received the authority of the Department of Health for Scotland to proceed with the erection of 17 houses.

Paisley.—HOUSING.—A preliminary stage in the development of the Gallowhill area, on the north-eastern outskirts of Paisley, for housing purposes has been reached. The Dean of Guild Court has granted authority to Mr. David Stevens Lang, New Sneddon-street, to form a new street, to be called Arkleston-crescent, and to erect seven dwelling-houses.

Stranraer.—HOUSES.—The T.C. has decided to proceed with the erection of 32 additional houses of the three apartment flatted type.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'† Bricklayers'† Plasterers'.†
Aberdeen	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/3½
Arbroath	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Ayrshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2 1/3
Berwickshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/7	††1/2½
Broughty Ferry	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Clackmannanshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Dumbartonshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dumfries	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Dumfriesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Duncon	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
East Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Edinburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Forfarshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Fort William	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/2
Galashiels	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Glasgow	1/7	1/7	1/7	1/8½	1/7	1/7	1/7	1/2½
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/3½
Hawick	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Helensburgh	1/7	1/7	1/7	1/8½	1/7	1/7	1/7	‡1/2½ †1/3½
Inverness	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	10d.–1/2
Inverurie	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/2
Kilmarnock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kincardineshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Kinross-shire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkwall	1/5	1/5	1/5	1/6	1/5	1/5	1/7	1/–
Lanarkshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Midlothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/3
Peeblesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Perthshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Peterhead	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/2
Renfrewshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Rothesay	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Roxburghshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
St. Andrews	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Selkirkshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/3½
Stirlingshire, West	1/6	1/6	1/6	1/6	1/6	1/6	1/7	1/1
Stornoway	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
West Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 1053.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	"	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	27	0
Add if in underpinning in short lengths	" "	6	0
Add if in floors 6 in. thick	" "	2	6
Add if in beams	" "	3	0
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	"	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork:—			
Fair external in half brick rings	" "	0	10
Axed in stocks	" "	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	"	1	0
Setting ordinary register grates and stoves	each	1	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks		4	15

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarte -inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	"	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0
Chilmark stone fixed complete	" "	17	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	4	3
Do. joists	" "	4	9
Do. roofs, floors and partitions	" "	5	3
Do. trusses	"	7	9

		¾"	1"	1½"	2"
Deal rough close boarding	per sq.	32/6	38/-	43/-	70/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	30	0
Do. to beams	per ft. sup.	0	9
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1½"	1¾"
Deal-edges shot	per sq.	—	42/6	50/-	57/6
Do. tongued and grooved	"	—	47/-	56/-	64/-
Do. matchings	"	44/-	49/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights: average size	"	3	9

DOORS

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	"	2/4	2/6	2/9
Two-panel moulded both sides	"	2/6	2/9	2/11
Four-panel Do. Do.	"	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	3
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/4	1/7	1/9	2/-
Ogee Do. Do.	"	1/6	1/9	2/3	2/9
Rain-water pipes with ears	"	1/6	2/4	—	—
Extra for shoes and bends	each	3/4	4/11	—	—
Do. stopped ends	"	1/6	1/10	2/9	3/3
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. Do. in flats	"	30	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

	½"	¾"	1"	1½"	2"	4"
Drawn lead waste per ft. run	1/1	1/7	1/10	3/-	3/6	—
Do. service .... "	1/6	2/-	2/5	3/6	—	—
Do. soil ..... "	—	—	—	—	—	6/-
Bends in lead pipe each	—	—	—	—	3/-	6/6
Soldered stop ends "	1/-	1/4	1/9	2/6	3/2	—
Red lead joints .... "	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints "	2/6	3/-	3/6	4/4	5/6	7/9
Lead traps and cleaning screws "	—	—	—	12/7	17/6	—
Bib cocks and joints "	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints "	15/4	17/2	25/6	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	" "	2	6
Do. Do. Keen's	" "	3	6
Add saw lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	3

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	7½
26-oz. Do.	" "	0	10
Obscured sheet	" "	1	1
¼-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10
¼-in. wired cast plate	" "	1	3

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10%, on the prime cost without establishment charges. A percentage of ½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

LONDON BUILDING ACT, 1930

THE committee of the Metropolitan Boroughs Joint Committee, in a communication to the L.C.C. Advisory Committee which is dealing with proposals for amending the London Building Act, 1930, express the view that district surveyors and their duties should be transferred from the L.C.C. to the Metropolitan borough councils. The Metropolis is unique in its method of control of new buildings and the laying out of new streets, and those who have had experience of both London and provincial methods consider the former to be cumbersome, inconvenient, wasteful, and generally unsatisfactory as compared with the latter, and that the London requirements are often oppressive and increase unnecessarily the cost of building. Under the provincial system, one set of plans and particulars of new buildings and new streets is deposited at the town hall, and that is sufficient for all purposes. In London, in certain cases, plans in duplicate must be deposited with the London County Council and a further copy supplied before formal sanction is obtained. In addition 48 hours' notice of intention to build must be given to the District Surveyor, who, however, is under no obligation to examine the proposals in advance, to issue any official approval, or even to indicate his requirements, until the work is in progress. He inspects the work from time to time, and gives his directions, which may seriously affect the progress of a building contract. In the first case, one authority in one place has to be dealt with. In London, two or three authorities, generally miles apart, are concerned. In the provinces inspections for all purposes are made by a salaried building inspector, usually acting under the Borough Surveyor and Engineer, no fee being charged to the owner. In London the drainage and sanitary work are inspected by the Borough Council's salaried building inspector, and all other work by the district surveyor, who is paid by fee by the builder. The cost of the building inspection service in the provinces is but a fraction of the cost in London, and is of equal value. The only effective remedy, say the Committee, is decentralisation and simplification.

TRADE NEWS

Process for Decorative Designs.

A period of experimental work in methods for the reproduction of the grains of the rarer woods and the veining of the choicest marbles on cheap basic material was recently crowned by the establishment of a new industry at Preston Hall, Aylesford, Kent, the British Legion settlement for disabled ex-Service men. The official inauguration was attended by the leading architects and builders from a wide surrounding district, who saw an ingenious process for the manufacture, on a considerable scale, of panelling, furniture, and a variety of delightfully finished articles by superimposing the real natural grains of walnut, thuya, Mexican cedar, pyramid mahogany, and so on, on to substances such as plywood, asbestos, glass and metal. They were shown specimens of the striking effects that are being achieved, and expressed a high opinion of the possibilities of the process. Briefly, the operation consists of the transference of the grains by means of gelatine rollers from an etched plate upon which have been spread suitable inks. The etching is then transferred to the surface of the material to be used, which has been specially prepared to receive the imprint. After the print is dried, the subsequent finish is made by means of cellulose. The new industry, under the name of Prestal Products, is, we learn, already enjoying a measure of success. Samples were shown at the Preston Hall Industries stand at the Exhibition of Disabled Soldiers' Industries held at the Imperial Institute, South Kensington, recently.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and*

Aylesbury.—20 additional non-parlour two bedroom type houses in York-place and the provision of the necessary roads, sewers and lighting, for the T.C.:—

Houses—
*Fleet & Roberts, Aylesbury £5,760 0 0

Roads and sewers—
*J. Smith & Sons, Hughenden... 695 16 2

Barking Town.—Provision of latrines at the Northbury school, for the T.C.:—
*Myall Bros., Ilford £926

Barking.—Electrical installations at the Infectious Diseases Hospital, Upney (first portion), for the T.C.:—

	Electric Lighting, Heating, Cooking, Power and Bell installation.	Wireless circuit (4 plug pts. only) in Administration Block.
Woodward Bros., Ltd. ...	£1,921 4 5	£14 8 3
Mortimer, Gall & Co.	1,907 4 10	13 2 0
J. Briggs & Co., Ltd.	1,900 0 1	12 0 0
Troughton & Young, Ltd.	1,840 5 1	14 0 0
G. E. Taylor & Co., Ltd.	1,828 9 7	9 14 3
Electrical Engineer and Surveyor, Barking Borough Council	1,819 7 4	10 17 4
H. J. Cash & Co., Ltd. ...	1,818 0 1	14 8 0
Electrical Installations, Ltd.	1,786 6 9	13 4 2
Francis Polden & Co. ...	1,775 9 0	10 6 0
City Electrical Co., Ltd.	1,747 10 1	12 5 0
Ellis & Ward, Ltd.	1,736 11 10	20 0 0
W. J. Furze & Co., Ltd.	1,706 10 1	12 0 0
Alpha Manufacturing & Electrical Co., Ltd.	1,702 17 7	8 18 0
C. Harvey & Co.	1,669 0 1	14 0 0
Cecil Cooper & Co., Ltd.	1,646 10 1	18 0 0
Harland & Wolff, Ltd. ...	1,631 0 1	18 0 0
E. Beckwith & Co., Ltd.	1,580 13 1	12 10 0
Victoria Electrical Co. ...	1,541 0 1	8 16 0
‡H. A. Neale & Co.	1,510 15 1	8 15 0

Barnsley.—Sunday school at Smithies, for the Trustees of the Wesleyan Reform Church:—
*H. Broadbent, Shepley, near Huddersfield.

Barton-upon-Irwell.—Six houses at Lever-street, Flixton, for the R.D.C. Mr. E. L. Leeming, surveyor:—
*J. F. Moore, Ltd., Eccles.

Batley.—22 houses at Bank-street and Great Wood-street, Mount Pleasant, for the Corporation:—
Builders—*G. W. Aveyard; *Briggs & Roberts.
Joiners—*J. Brook & Son; *G. Armitage & Son; *J. E. Blackburn.
Plasterers—*J. Greenwood; *J. Gill.
Plumbers—*E. Iveson.
Slaters—*Pickles Bros. (Slaters), Ltd.
Electrician—*J. Terry.
Painters—*Pickles, Ayland & Co., Ltd.

Beverley.—County Hall extensions, for the East Riding C.C. Mr. B. B. Stamford, County Architect, County Hall, Beverley:—
*Quibell & Sons, Ltd., Hull £4,170

Birmingham.—Erection of the Alan Memorial Church in Newtown-road, Great Bar, for the Building Committee of the Newtown-road Congregational Church. Mr. Albert Bye, architect, 323, High-street, West Bromwich:—
*A. E. Sorrill, Birmingham.
(Estimated cost: £4,000.)

Birmingham.—Rebuilding the Chromalium works in Brookfield-road, Hockley, for Messrs. Novelli & Company, Ltd. Mr. S. N. Cooke, F.R.I.B.A., architect, Sun-buildings, Bennett's-hill:—
*V. Danks, Birmingham.

Blackburn.—Extensions to Brockhall Institution, Langho, for the Committee of Management of the Calderstones Certified Institution for Mental Defectives. Messrs. Rees & Holt, FF.R.I.B.A., architects, 64, Rodney-street, Liverpool:—
*T. Croft & Sons, Ltd., Preston
(Estimated cost: £90,000.)

Boston.—Extension to canning factory in Norfolk-street, for the English Preserved Foods, Ltd. Mr. G. W. Periam, resident architect:—
*Boulton & Paul, Ltd., Norwich.

Bury.—Extensions to dye works, for Messrs. S. Smethurst & Sons, Ltd., Wyfold. Messrs. Spencer & Clarke, Ltd., architects, Elton Saw Mills:—
Builders—*Spencer & Clarke, Ltd..
Slating—*Wm. Royle & Co., Manchester.
Plumbing—*Marsden & Barton.
Patent glazing—*W. H. Heywood & Co., Manchester.
(Rest of Bury.)

Carlisle.—Steelwork for new 'bus station and garage in Lowther-street, Bickersgate, for the Ribble Motor Services, Ltd., Frenchwood-avenue, Preston. Mr. C. D. Quinn, L.R.I.B.A., resident architect, Frenchwood-avenue, Preston:—
*Robinson & Kershaw, Ltd., Manchester.

Chapelhall.—For the Chapelhall housing scheme, for the Lanarkshire C.C. Mr. Peter Smith, architect, Clydesdale-street, Hamilton:—
Digger, brick and mason works—*B. Morgan & Co., Townhead-street, Hamilton.
Joinery, carpentry and ironmongery works, etc.—*D. & W. Young, Works Contractors, Newarthill.
Plumber work, etc.—*A. MacLachlan, Sanitary Engineer, New Stevenson.
Slater work, etc.—*Jas. H. Weir & Sons, 18, Kildman-street, Coatbridge.
Plaster work, etc.—*Wilson & Hendry, 53, Portland-place, Hamilton.
Painter work, etc.—*J. Scott & Co., Decorators, Lanark.
Electric installations, etc.—*Alexander Robertson, 248, Woodlands-road, Glasgow.

Cleckheaton.—Reconstruction of conveniences at Oakenshaw Council school, for the Spenborough U.D.C. Mr. A. Rothera, surveyor, Church-street, Cleckheaton:—
Mason—*A. L. Greenwood, "Lyndhurst," Hightown-road, Liversedge.
Joiner—*Beaumont & Smith, Gomersal, near Leeds.
Plumber—*J. W. Bancroft, Dewsbury-road, Cleckheaton.
Plasterer—*Sellers Bros., Booth-street, Cleckheaton.

Coventry.—Shopping arcade, in bronze metal; also shopfronts and interior fittings for all shops:—
*A. Hawkes & Co., Shopfitters, Leicester.

Coventry.—Church hall at the corner of Beake-avenue and Foster-road, for St. Nicholas Parochial Church Council:—
*Harrison-Smith Buildings, Ltd., Birmingham.

Darlaston.—Painting the exterior of the Council houses, for the U.D.C. Mr. C. W. D. Joynson, architect:—
*T. Myatt, Darlaston £445

Doncaster.—Workshops, garage and new drains at the new highway depot site, Marsh-gate, for the Corporation. Mr. F. Oscar Kirby, Borough Engineer, 3, Priory-place:—
Builders—*Hemsworth Bros.
Steelwork—*H. Barrett & Sons, Ltd., Bradford
Cement—*G. & J. Earle, Ltd., Hull.
Glazing—*E. Scargall & Co., Ltd.
Windows—*Helliwell & Co., Brighouse.
Plumbing—*E. Scargall & Co., Ltd.
Tiles—*H. Payne.
Bricks—*Cocking & Sons, Ltd., Balby.
(Rest of Doncaster.)

Downpatrick.—Alterations and repairs to union infirmary, for the B.G.:—
*H. Boyd, Riverside, Drumaness £234

Dumfries.—Two large bungalows at Ardwell-road. Mr. William Murray, architect, 5, Murray-place:—
*S. Murray & Sons, Murray-place, Dumfries.

Durham.—Alterations to St. Oswald's C.E. school. Mr. C. W. Milburn, A.R.I.B.A., Feetham, Darlington:—
*Tom Coates, Hallgarth-street, Durham

Frome.—New senior school, for the Managers of the St. John's Church of England Schools. Mr. A. J. Pictor, architect, Abbey-chambers, Bath. Quantities by the architect:—

T. S. Hobbs & Son, Bruton	£6,248
Chapman, Lowry & Puttick, Haslemere	6,200
Channing & Osmond, Burnham-on-Sea	6,189
F. & E. Small, Taunton	6,173
Hodder & Sons, Frome	6,126
G. Mannings, Bath	6,077
D. R. Dunthorn, Glastonbury	6,036
A. S. Sperring, Bath	5,976
Melhuish & Saunders, Wells	5,964
A. Wills & Sons, Bath	5,920
R. Butcher & Son, Warminster	5,876
S. W. Foster, Radstock	5,850
C. Barnes & Sons, Frome	5,804
F. Rendell & Sons, Devizes	5,785
R. W. Sims, Frome	5,485
F. J. Amery & Sons, Bath	5,416
*H. Barnes & Son, Locks Hill, Frome	5,338

Glasgow.—For the Garngad rehousing scheme 132 houses, for the Corporation. Mr. Robert Horn, architect, Housing Director's Office, Trongate, Glasgow:—

Digger, brick and mason works—
*A. W. Patterson, 104, Pollockshaws-road, Strathlargs, Glasgow £15,463 19 0

Joinery, ironmongery and carpentry works—
*R. Anderson & Co. (Glasgow), Ltd., 1070, Argyll-street, Glasgow £9,818 11 0

Slater work, etc—
*William Laurie, 222, St. James-road, Glasgow, C.4 ..... £1,299 7 0

Plumber work and gas fitting—
*McCulloch & Griffen, 47, Hope-street, Glasgow, C.2 ..... £6,123 6 8

Plaster work, etc.—
*A. McKellar, Palm-street, Parliamentary-road, Glasgow £2,351 4 7

Glazing work, etc.—
*The Woodside Glass and Glazing Co., 18, Renfrew-street, Glasgow £537 7 1½

Glasgow.—New temporary school for the Garngad district, for the E.C. Mr. William McCaig, F.R.I.B.A., Education Architect, 129, Bath-street:—
*Cowieson, Ltd., Charles-street, St. Rollox, Glasgow, N.

Glasgow.—New storage accommodation, for Messrs. Cochrane, Ltd., 146, Argyll-street. Mr. James G. Aitchieson, architect, 170, Hope-street:—
*D. Allan, 42, Easdale-drive, Shettleston, Glasgow.

Glasgow.—532 houses at Cuthbertson housing site, for the Corporation. Mr. Robert Horn, architect, Housing Directors' Office, Trongate:—
Digger, brick and mason works, etc.—
*A. W. Patterson, 104, Pollockshaws-road, Strathbargs, Glasgow £58,641 13 0
Slater work, etc.—
*W. Grayson & Co., 64, Sword-street, Calton, Glasgow £7,433 9 4
Plumber work and gas fitting—
*McCulloch & Griffen, 47, Hope-street, Glasgow, C.2 ..... £24,453 0 0
Plaster work, etc.—
*Hugh S. Bathgate, 540, Duke-street, Glasgow, E.C. £9,343 17 7
Glazing work, etc.—
*Woodside Glass and Glazing Co., 16, Renfrew-street, Glasgow £1,343 6 4½
Joinery, carpentry and ironmongery works, etc.—
*John Lawrence (Glasgow), Ltd., 30, Wellington-street, Glasgow £36,473 9 4

Grantham.—Three shopfronts for Messrs. J. H. Hopkinson, St. Peter's Hill, Grantham:—
Bronze shopfronts—*A. Hawkes & Co., Leicester.

Greenford.—New shopfront and interior fittings at Ruislip-road:—
Shopfronts and interior fittings—*A. Hawkes & Co., Leicester.
Electrical fittings—*Kingsfield Display Co., 57, Humberstone-gate, Leicester.

Grimsby.—New shopfront, etc., at 3, Freeman-street:—
*A. Hawkes & Co., Leicester.

Halifax.—Structural steelwork in 'bus depôt, Elmwood, for the C.B. Mr. A. C. Tipple, Borough Engineer, Crossley-street, for the C.B.:—
*Lambhill Ironworks, Ltd., Lambhill, Glasgow, N.W.

Hyde.—Extensions to works in Mary-street, by Messrs. Charles Watkins & Co., Ltd., Eldon-street, Chorlton-on-Medlock, Manchester:—
*J. A. Fagan, Manchester.

Isleworth.—Extensions to the Green school, Busch-corner, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, S.W.1:—
Henry Knight & Son £30,166
J. Dorey & Co., Ltd., Brentford 29,257
William Lacey, Hounslow 28,967
Hammond & Barr 28,560
W. Lawrence & Son, Ltd. 28,556
L. & W. Whitehead, Ltd. 27,840
A. & B. Hanson, Ltd., Southall 27,600
W. J. Dickens 27,460
Y. J. Lovell & Son, Gerrards Cross ... 26,740
G. Challis & Co., Ltd., Brentford 26,581
‡W. S. Try, Uxbridge 26,480
(Remainder of London.)

Jarrow-on-Tyne.—Rebuilding of the "Lord Nelson" Inn at Monkton, for the Newcastle Breweries, Ltd. Messrs. J. Oswald & Son, architects, Worswick-street, Newcastle:—
*R. Carse & Son, Amble.

Keighley.—Headquarters for the local branch of the British Legion. Messrs. R. P. Broster & Sons, architects, Craven Bank-chambers, North-street:—
Mason—*H. J. Raistrick.
Joiner—*Pearson & Wharton.
Plasterer—*E. Stowell.
Plumber—*W. Wallace.
(All of Keighley.)
(Estimated cost, £2,000.)

Kiveton Park.—Improving sewage disposal works and for converting into water closets 190 pail and privy closets in parish of Anston, for the R.D.C. Mr. W. M. Gibson, surveyor:—
Conversions—
R. Porter & Sons, Sheffield ... £2,248 1 6
E. Butcher & Sons, Hillsbro' ... 2,212 9 6
Melling Bros., Sheffield 2,132 10 0
W. Memmory, Swallownest 1,856 7 0
Mollekin Bros, Maltby 1,613 13 9
B. Newton, Killamarsh 1,980 0 8
J. W. Revill, Dinnington 1,608 4 3
T. J. Green & Co., Worksop ... 1,593 0 0
A. Plant, Sheffield 1,560 0 0
W. Blair, Rotherham 1,488 9 0
*W. Demaine, Main-street, Catcliffe, near Rotherham..... 1,438 10 1
Sewage disposal works, extensions—
Melling Bros., Ltd., Sheffield ... 4,456 0 0
R. C. Crawford & Co., Ltd., Moreton 3,152 18 11
Mollekin Bros., Maltby 2,886 12 4
J. Dearnley & Co., Huddersfield 2,836 0 0
G. G. Middleton & Sons, Ltd., Worksop 2,490 0 0
Beeden, Ltd., Rotherham 2,269 10 9
J. W. Revill, Dinnington 2,151 12 0
W. Blair, Rotherham 2,025 0 0
*W. Memmory, Swallownest, near Sheffield 1,892 17 5

Lanchester.—Water carriage conversion scheme in village:—
*J. Barrow & Sons, Burns-street, Jarrow-on-Tyne £7,136

Leeds.—Shopfronts and enclosures for Messrs. Stephensons, Ltd., 13-19, King Edward-street. Messrs. Winn & Sons, architects, Leeds:—
Shopfronts and enclosures—*A. Hawkes & Co., Leicester.

Littlehampton.—Two pairs of one-storied houses for aged people, on a site near Harwood-road, for the U.D.C. Building Manager:—
*A. Clare, Ltd., Tudor Works, South Farm-road, Worthing £1,042

Littlehampton.—40 houses at "Thorncroft," Horsham-road, for the U.D.C. Mr. F. E. Marshall, Building Manager:—
*C. Swain, Estate Office, Sea-road, Rustington £13,728

¶London.—The following works contracts have been placed by the War Office during the week ending December 17:—
Larkhill—reconstruction of water supply—J. B. Edwards & Co. (Whyteleafe). Ltd., London, W.
Warley—erection of dining-room and cookhouse—H. E. Jerram, London, E.

¶London.—Tenders accepted by H.M.O.W., for the week ending December 19:
General Post Office (South)—erection of superstructure—Trollope & Colls, Ltd., 5, Coleman-street, E.C.2.
Liverpool Head Post Office—internal decorations—R. & J. Tilley, 41, Ariel-road, Bootle, Liverpool.
Belfast Law Courts—marble finishings—J. Whitehead & Sons, Ltd,. 64, Kennington Oval, S.E.11.
Brondesbury branch post office—alterations—Soole & Son, Ltd., Dunstable Works, Richmond.

London.—Reconstruction of the carriageway, etc., in King-street, for the Hammersmith B.C.:—
Wood Paving.
G. Wimpey & Co., Ltd. £31,143 15 7
Fitzpatrick & Son 29,570 17 6
Wm. Griffiths & Co., Ltd. 28,989 12 7
G. J. Anderson 28,326 13 2
Improved Wood Pavement Co., Ltd. 27,211 1 2
Acme Flooring and Paving Co. (1904), Ltd., Barking ... 25,698 14 0
2 in. Compressed Natural Rock Asphalt.
Val de Travers Asphalte Paving Co., Ltd. £27,599 4 2
Neuchatel Asphalte Co., Ltd. 27,425 15 2
Limmer and Trinidad Lake Asphalt Co., Ltd. 27,295 6 4
G. Wimpey & Co., Ltd. 25,268 5 7
*French Asphalte Co., Ltd., Caxton-street, S.W.1 ..... 24,825 13 9
(All of London.)

London.—Redecoration of the staircase and entrance, and external painting at Nos. 118-120, Drury-lane, for the Westminster City Council. City Engineer:—
Wilton Decorators, Ltd. £184 19
Sims & Russell 139 0
The Army & Navy Co-operative Society, Ltd. 133 10
F. C. Hoskins & Co., Ltd. 119 10
*J. Garlick (1910), Ltd. 100 10

London.—Redecoration of flats Nos. 2 and 6, Canada-buildings, Lock House, two offices and corridor, and No. 2, Lock Cottages, for the Westminster City Council. City Engineer:—
W. Whiteley, Ltd. £210
The Army & Navy Co-operative Society, Ltd. 198
J. Garlick (1910), Ltd. 195
Wilton Decorators, Ltd. 194
F. C. Hoskins & Co., Ltd. 188
*Sims & Russell 183

ESTIMATING ON RIGHT LINES

Everyone whose business it is to quote for building work should master the principles upon which estimating is based. These principles are clearly explained and illustrated in.

'HOW TO ESTIMATE'

by J. T. REA,

an unique and invaluable work which is not excelled in thoroughness or in scope by any other book on the subject.

Fourth edition (now ready), 540 pages with 400 illustrations. Price 15s. net (by post 15s. 9d.). Containing thousands of prices and hundreds of examples of analysis, showing how a builder can make up rates for himself. In view of the difficulty of fixing standard prices under present conditions, the author has included a valuable series of Adaptation Tables and Percentages (Revised to February, 1930) *which show how rates may be adjusted to meet variations at any time.*

Before purchasing any other book on this vitally important subject, you are invited to inspect this—the standard work in use by over 30,000 builders

A Copy will be sent by return, and your Remittance refunded if the work does : : not satisfy your requirements : :

B. T. BATSFORD, LTD.

Publishers, 15 North Audley Street, W.1.

London.—New shopfronts and store fittings at 7, Woodgrange-road, Forest Gate:—
Shopfronts and store fittings—*A. Hawkes & Co., Leicester.

London.—Erection of the secondary school in Carlton-avenue, Wembley Park, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, Westminster, S.W.1:—
J. Dorey & Co., Ltd., Brentford £49,937
Henry Knight & Son 48,906
William Lacey, Hounslow 48,391
W. Lawrence & Son, Ltd. 47,914
L. & W. Whitehead, Ltd. 47,427
J. Stewart & Sons, Ltd. 46,773
C. J. Newby & Bros. 46,087
J. Laing & Son, Ltd. 45,728
Y. J. Lovell & Son, Gerrards Cross 45,640
W. S. Try, Uxbridge 45,238
‡W. J. Dickens 44,990
(Remainder of London.)

Manchester.—Interior structural alterations to the "Royal Oak" Hotel, Barlow Moor-road, Chorlton, for Messrs. Threlfall's Brewery Co., Ltd., Cook-street Brewery, Salford. Mr. B. Waterhouse, F.M.S.A., architects' department:—
*Tinker & Young, Ltd., Manchester.

Manchester.—Alterations and extensions to the "Whalley" Hotel, corner of Withington-road and Upper Chorlton-road, Brook's Bar, for Messrs. Threlfall's Brewery Co., Ltd., Cook-street Brewery, Salford. Mr. B. Waterhouse, F.M.S.A., architect's department:—
*A. Hodkinson, Ltd., Manchester.

Middlesbrough.—12 cottages for aged people on the Whinney Banks estate, for the T.C.:—
‡Ball & Thomas, Norton £2,163

Middleton.—Concrete panel fencing to 157 houses at Boarshaw, for the T.C. Borough Architect:—
*The Concrete Unit Co., Ltd., Trafford Park, Manchester.

Newcastle-on-Tyne.—New school to accommodate 1,380 children at Cowgate, for the T.C. Mr. F. H. Holford, architect:—
‡R. Blackett & Sons, Darlington ... £55,694

Newcastle-on-Tyne.—Warehouse, for Messrs. Mawson & Swan. Messrs. W. Dixon & Sons, architects, Collingwood-street:—
*G. G. Carr, Coquet-street.

Newcastle-on-Tyne.—Factory, for Messrs. Sinton & Baxter. Mr. Marcus K. Glass, F.R.I.B.A., architect, 20, Saville-row:—
*W. Hall, Derwentwater-road, Gateshead.

Newcastle-on-Tyne.—Store in Sutton-street, for the Model Milk Co., Ltd. Mr. William Riddle, architect, 53, Denham-terrace, Wallsend:—
*Glasgow Steel Roofing Co., Ltd., Emerson-chambers, Newcastle.

Newcastle-upon-Tyne.—Rebuilding of the showrooms and garage, for Messrs. Rossleigh, Ltd.:—
*Cussins, Ltd., Newcastle.

Newcastle-on-Tyne.—10 houses on the High Heaton estate, for the T.C.:—
*D. Gourlay & Co., Shields-road, Newcastle.

Newton Abbot.—Four houses at Dawlish West, for the R.D.C.:—
*W. J. Lamshead £1,565

Newton-le-Willows.—Mission church at Newton Common, Earlestown, for Rev. J. B. Meagher, Church of St. Mary and St. John, Crow-lane:—
*I. Dixon & Co., Ltd., Liverpool.

Northwich.—Rebuilding the "Cock" Hotel, for Messrs. Greenall, Whitley & Co., Ltd., Wilderspool Brewery, Warrington. Messrs. Powles & King, F. & A.R.I.B.A., architects, 7, Winnington-street:—
*S. Appleton, Northwich.

Oldham.—Boiler house and messroom, also new laboratory at Higginshaw Gas Works, for the C.B. Mr. F. Greenhalgh, Gasworks Engineer:—
*Whitworth, Whittaker, Ltd., Oldham.

Oswestry.—27 non-parlour houses on the Lawn-road frontage on the Llwyn Farm estate, for the Housing Committee. Mr. G. W. Lacey, Borough Surveyor and Engineer:—
*H. Hughes, Wrexham £8,737

Oxford.—62 houses on the Quarry Fields site, Headington:—
*S. E. Mose & Son, St. Fabian's-drive, Chelmsford £27,960

Paisley.—Double villas at Ettrick-drive:—
*D. A. Lang & Co., Paisley.

Rugby.—Branch on the Southfields estate, Rugby, for the Rugby Industrial and Provident Co-operative Society, Ltd., 45, Chapel-street, Rugby. Mr. L. G. Ekins, F.R.I.B.A., Architects' Department, Co-operative Wholesale Society, Ltd., 99, Leman-street, London, E.1:—
*F. Hollowell, Rugby.

Snaith.—New bridge over the Aire and Calder navigation, between Snaith and Thorne:—
*S. Butler & Co., Ltd.

South Shields.—257 houses on the Dean-road estate, for the T.C.:—
*J. Barrow & Sons, Jarrow.

Sunderland.—Reconstruction of Hendon Dock bridge:—
*Cleveland Bridge & Engineering Co., Darlington.

Swadlincote.—Decorating the interior of 99 houses at Upper Midway, for the U.D.C. Mr. G. A. Taylor, engineer and surveyor :—

Robt. Warren, Newhall, near Burton-on-Trent £290

TURPIN'S

60 YEARS' REPUTATION FOR RELIABLE WORKMANSHIP.

COMPETITIVE PRICES—HIGHEST QUALITY —EFFICIENT SERVICE.

Please ask for Booklet " B "
Turpin's Parquet Flooring Co., 25, Notting Hill Gate London, W.11. Phone: Park 1985 and 7585.

PARQUET, BLOCK & HARDWOOD FLOORING

Telegrams: " Frolic, Liverpool." ' Phone 228 Bank

E. B. BURGESS & CO.

5, CASTLE ST., LIVERPOOL.

WOOD BLOCK FLOORING AND PARQUETRY.

SEASONED HARDWOODS

of all descriptions for

BANK, OFFICE, SHOPFITTERS and BUILDING TRADES.

J. GLIKSTEN & SON, LTD.

CARPENTERS ROAD, STRATFORD, LONDON, E.15.

Telephone: Amherst 4444 (10 lines). Telegrams: Gliksten, 'Phone London.

Tamworth.—Alterations to 21, George-street, for the Star Tea Co., Ltd., Mitre-square, London, E.C.3 :—

*Hyde & Jenks, Ltd., Cardiff

Taunton.—Reconstructing portions of the sewage disposal works, for the T.C. :—

*F. & E. Small £6,599

Thornton.—New engine sheds, etc., for the London and North Eastern Railway Co. :—

*J. & R. Watson, Iona-street Works, Edinburgh.

Walsall.—New hotel in Mitton-street, for Messrs. Mitchells & Butlers, Ltd., Cape Hill brewery, Smethwick, Birmingham. Messrs. Wood & Kendrick, & Edwin F. Reynolds, F. and A.R.I.B.A., architects, 57, Colmore-row, Birmingham :—

*Thompson & Arblaster, Walsall.

Wednesbury.—34 houses on the Hydes-road site, for the T.C. :—

*B. Denning, Walsall £10,730

West Ham.—Installation of heating apparatus at the Carter-road Central School, for the C.B. :—

Briant & Morgan, Eastleigh	£3,810
Thorpe & Co., St. Albans	2,863
Mann Bros., Dartford	2,750
William Freer, Ltd.	2,750
Chas. P. Kinnell and Co., Ltd.	2,595
Grant & Maisey, Dartford	2,562
F. Church, Oxford	2,525
The Abbey Heating Co.	2,498
H. J. Cash & Co., Ltd.	2,428
The Watkin Heating Co., Ltd., Westcliff-on-Sea	2,402
Barford & Perkins, Ltd., Rochester	2,385
Jas. Coombe & Son, Ltd., Welwyn Garden City	2,367
The National Heating Co. (1928), Ltd.	2,249
*Fretwell Heating Co., 36, Crescent-road, E.13	2,178

(Remainder of London.)

West Hartlepool.—Parish hall at St. Cuthbert's Church :—

*W. Pearson & Son, Burn-road, West Hartlepool.

Wrexham.—Sewerage and sewage disposal works, for the R.D.C. :—

Cern—
*C. L. Warren, Wallasey £6,985

Ruabon—
*C. L. Warren 3,410

Rhostyllen —
*C. L. Warren 9,351

Broughton—
*C. L. Warren 10,134

Rossett—
*Joseph Johnson, Rossett 4,796

Bwlchgwyn—
*R. Williams & Son, Brymbo 6,401

J. J. ETRIDGE, J.E. Ltd.

SLATING AND TILING

SLATE MERCHANTS

CONTRACTORS

Inspections and Reports made on

OLD OR FAULTY ROOFS

in any part of the country.

Telephone: Bishopsgate 1944/5 or write

Bethnal Green Slate Works,

BETHNAL GREEN, LONDON.

Whitworth.—Conversion of about 270 pail closets to fresh water system in Facit Ward, for the U.D.C. Mr. G. V. Law, surveyor :—

*R. Blincoe, Rochdale.

Wirksworth.—Alterations to the "Jug and Glass" Inn, Longcliffe, Brassington, for Messrs. Offiler's Brewery, Ltd., The Brewery, Derby :—

*Oulsnan & Fearn, Wirksworth.

BUY BRITISH

FLOORINGS

WOOD BLOCK PARQUET

SOLID T & G HARDWOOD

PANELLING

POINT PLEASANT LONDON S·W·18

Stevens & Adams Ltd.

PHONE PUTNEY 4701·2·3·4

GREYSTONE LIME

Chalk, Lime, Portland Cement, Plaster (Strapite and Keene's) delivered by truck loads any Station, also by lorry

J. S. PETERS

Works: Merstham, Surrey. Telephone: No. 9 Merstham. Depot: 417, Old Kent-road (Bricklayers' Arms Station). THE DORKING LIME & J. S. PETERS (LONDON), Ltd. Telephone: Bermondsey 2200.

HOSPITAL & SCHOOL STOVES

SOLE MAKERS OF WRIGHT'S IMPROVED AND ALSO SHORLAND'S PATENT WARM AIR VENTILATING PATTERNS.

GEO. WRIGHT (LONDON) LTD. 19 NEWMAN ST. OXFORD ST. LONDON W.1. WORKS - BURTON WEIR NORTHAMPTON

FITZPATRICK & SON

MASONS & PAVIORS

PAVING WORK OF EVERY DESCRIPTION

Largest stock of Second-Hand and Redressed (equal to new) Granite Setts in London, at Rock-bottom Prices.

Rectangular and Crazy York Paving, Rockery Stone, Granite Chippings and Tarmacadam.

Spur Stones to order. Quadrant Blocks in stock.

454 OLD FORD ROAD, LONDON, E.3

'Phone—EAST 6336 7/8

ROWLAND BROS. ESTAB. 1874

(DEPT G.)

BLETCHLEY

Manufacturers of

JACK ROLLS
TOOL BOXES
BRICK SKIPS
WHEELBARROWS
WATCHMAN'S HUTS
FENCING & GATES
ROAD NOTICE BOARDS
HAND, ORDERLY, & DOBBIN CARTS, ETC.

CATALOGUES ON APPLICATION.

London Showroom 40/42, OXFORD ST. W1

BRICKS & MORTAR

are separate things. It's the way they are put together that distinguishes our work.

'phone HOP 6081

W&M NEGUS LTD.

Building Contractors

Station Works, KING JAMES ST. S.E.1